

Master of Public Health
Integrative Learning Experience Report

Translating data into impact: baseline insights from a 21-site food as medicine program

by

Gabrielle Talavera

MPH Candidate

submitted in partial fulfillment of the requirements for the degree

MASTER OF PUBLIC HEALTH

Graduate Committee:

Priscilla Brenes, Ph.D.

Valerie Padilla Carroll, Ph.D.

Valentina Trinetta, Ph.D.

Public Health Agency Site:

Center for Nutrition & Health Impact

Site Preceptor:

Victoria Zigmont, Ph.D., MPH

KANSAS STATE UNIVERSITY

Manhattan, Kansas

Copyright

GABRIELLE TALAVERA

2026

Abstract

Chronic diseases account for the majority of deaths and healthcare expenditures in the United States. Many of these conditions are preventable or can be managed through lifestyle modifications such as healthy eating and physical activity. Due to the strong relationship between diet and chronic disease, food-based healthcare interventions, commonly referred to as Food is Medicine programs, have gained increasing attention as strategies for prevention and disease management. Literature suggests that these interventions can improve dietary behaviors and health outcomes, including increased fruit and vegetable consumption and improvements in biometric markers such as hemoglobin A1c and blood pressure. The purpose of this integrated learning experience was to analyze baseline survey data from a national Food is Medicine program and translate the findings into site-specific program summaries for participating food banks. The project aimed to support data transparency and strengthen reciprocal relationships between evaluators and community-based organizations. Activities included the development of a process map to guide project planning, descriptive statistical analysis of over 3,000 baseline surveys using statistical software, the creation of twenty tailored program one-pagers, and collaboration with multi-sector stakeholders through my role as a Research Associate at the Center for Nutrition & Health Impact. Baseline findings indicated high levels of food insecurity and chronic disease among participants, along with limited fruit and vegetable consumption and significant healthcare utilization. These results reinforce existing evidence linking food insecurity, dietary patterns, and chronic disease. In addition to contributing to the evaluation of a national Food is Medicine initiative, this project provided insights into the role of health communication, cross-sector collaboration, and data transparency in public health program evaluation. Findings highlight the importance of reciprocal evaluation practices that return actionable data to community-based organizations implementing Food is Medicine programs.

Subject Keywords: Food is Medicine; chronic disease; food insecurity; public health nutrition; program evaluation; health communication

Table of Contents

Copyright	2
Abstract	3
Chapter 1: Literature Review	7
The United States' Chronic Disease Burden	7
The Role of Food and Nutrition Insecurity in Chronic Disease	8
The Origin and History of Food is Medicine.....	11
Food is Medicine Models	12
Food is Medicine Literature: Where We Are Now.....	15
Public Perception and Awareness of Food is Medicine	16
Food is Medicine in Practice	17
Food as Medicine 3.0 Grant Program.....	19
The Center for Nutrition & Health Impact	20
Chapter 2: Learning Objectives, Project Description, Methods	23
Learning Objectives.....	23
Chapter 3: Products & Results	26
Baseline Survey Results.....	26
Development of Tailored One-Pagers	28
Project Planning and Implementation.....	29
Chapter 4: Discussion	31
Interpretation of Survey Findings	31
Lessons from Project Planning and Implementation	33
Limitations	35
Implications for Public Health Practice and Future Directions	35
References	37
Appendix	41
Appendix 1 - Synthesis and/or Integration of Competencies	41
Appendix 2 – Demonstration of Competency Attainment	45
Appendix 3 – Systems Thinking Tool: Process Map	48
Appendix 4 – Finalized Baseline One-Pagers	49

List of Figures

Figure 1.1 Food is Medicine Pyramid.....	13
--	----

List of Tables

Table A.2 Synthesis and Integration of Competencies	41
Table A.3 Attainment of Competencies.....	45

Chapter 1: Literature Review

The United States' Chronic Disease Burden

As defined by the Centers for Disease Control and Prevention (CDC), a chronic disease is a condition that lasts one year or longer and requires ongoing medical treatment and/or restricts activities of daily living. In the United States, the most prevalent chronic diseases include cardiovascular disease, metabolic conditions such as diabetes and obesity, and cancer.

Cardiovascular disease alone affects nearly half of U.S. adults over the age of 20, comprising conditions such as hypertension, stroke, and heart failure (Schwartz et al., 2025). Chronic disease accounts for the majority of leading causes of death nationwide and are responsible for approximately 90% of U.S. healthcare costs (Hacker, 2024; Volpp et al., 2023). Despite spending more per capita on healthcare than any other high-income country, the United States consistently ranks last on key health outcomes, demonstrating the inefficiency of a system oriented toward treatment rather than prevention (Schwartz et al., 2025).

A notable feature of chronic disease is that one's risk in developing it can be reduced through lifestyle changes, such as increased physical activity and proper nutrition. Nevertheless, prevention remains underemphasized in the U.S. healthcare system: less than 3% of total healthcare spending is on prevention efforts and public health initiatives (Hacker, 2024). Poor nutrition is an especially important risk factor contributing to more than \$1 trillion in healthcare costs and over 600,000 deaths each year in the United States (Ridberg et al., 2025). Dietary patterns among U.S. adults deviate substantially from national recommendations, with approximately 90% failing to consume the daily recommended servings of fruits and vegetables outlined in the 2020-2025 *Dietary Guidelines for Americans*. In addition, consumption of foods high in calories, sodium, and saturated fats exceeds recommended levels (Schwartz et al., 2025). Despite advances in treatment, the prevalence of diet-related chronic diseases such as diabetes

and obesity continues to rise, suggesting that downstream efforts alone are insufficient in curbing disease incidence.

Traditionally, nutrition has been framed as an individual responsibility. However, the increasing burden of diet-related chronic disease reflects broader structural and systemic influences within the U.S. food system. The contemporary food environment is shaped by economic incentives favoring low-cost, shelf-stable products, ultimately resulting in the widespread production and consumption of ultra-processed foods created with inexpensive ingredients (Baker et al., 2020). While these foods may appear affordable at first, their long-term health consequences significantly contribute to healthcare costs (Volpp et al., 2023). Additionally, food policy and availability are heavily influenced by power dynamics within the agricultural and food industries, including lobbying efforts that shape production priorities and food regulation protocol (Sievert et al., 2020). Beyond the food system itself, structural inequities across housing, employment, and other social institutions disproportionately impact marginalized communities, increasing exposure to financial instability, food insecurity, and other experiences that undermine healthy eating habits. Therefore, as chronic disease prevalence and its associated healthcare costs continue to rise, attention has begun to shift to upstream drivers of health, such as access to nutritious food.

The Role of Food and Nutrition Insecurity in Chronic Disease

Food insecurity and nutrition insecurity are distinct but related constructs that measure different dimensions of food access and dietary quality. Food insecurity, as defined by the United States Department of Agriculture (USDA), refers to the “limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways” (Brandt et al., 2023). Importantly, food security does not necessarily

imply access to foods of high nutritional value. Therefore, nutrition security has emerged as a complementary concept with a proposed definition of “consistent access, availability, and affordability of foods and beverages that promote well-being and prevent and if needed, treat disease” (Brandt et al., 2023). Distinguishing between food insecurity and nutrition insecurity has become increasingly important as ultra-processed foods comprise a growing portion of the U.S. food supply. In 2023, for example, 13.5% of American households were food insecure, yet 90% of Americans had suboptimal nutrition (USDA Economic Research Service, 2023; Brandt et al., 2023). This contradiction demonstrates that factors of the U.S. food system, beyond food availability, shape dietary behaviors and health outcomes.

A substantial body of literature has documented associations between food and nutrition insecurity and chronic disease. Individuals who have experienced food insecurity are at elevated risk of obesity, insulin resistance, and poor glycemic control later in life (Brandt et al., 2023). Evidence from a nationally representative survey of U.S. adults aged 50-60 conducted in 2020 found that 14% met the criteria for food insecurity; among these individuals more than half reported living with two or more chronic conditions. Food insecure respondents were significantly more likely than their food secure counterparts to suffer from respiratory disease, chronic pain, metabolic disease, or sleep disorders and to self-report their health status as either fair or poor (Leung et al., 2020).

The relationship between food and nutrition insecurity and health outcomes is further demonstrated through federal food assistance programs such as the Supplemental Nutrition Assistance Program (SNAP; formerly known as food stamps) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). While both programs serve to reduce food insecurity in the U.S., WIC places greater emphasis on nutrition security by ensuring

access to nutritionally appropriate foods for pregnant individuals, infants, and children.

Participation in SNAP and WIC has been associated with improvements in food security and reductions in healthcare costs, likely due to improvements in diet quality and related health outcomes (Brandt et al., 2023). Conversely, evidence suggests individuals with chronic disease are more likely to experience food insecurity than those without. For example, nearly half of U.S. adults with hypertension were eligible for SNAP and WIC based on income between 2017 and 2020 (Schwartz et al., 2025).

Despite strong evidence linking food and nutrition insecurity to chronic disease, the healthcare response has been limited. This gap may reflect structural features of the U.S. healthcare system, such as the longstanding emphasis on treatment rather than prevention and limited integration of nutrition into clinical training and education. Although prevention has the potential to reduce both the human and economic costs associated with chronic disease, less than 3% of the total healthcare budget in the U.S. is allocated to preventive services. Nutrition-focused prevention efforts face additional barriers, such as inadequate clinician training and low confidence in delivering dietary counseling. The American Heart Association reports that more than 70% of U.S. medical schools provide fewer than the recommended minimum of 25 hours of nutrition education, and only 14% of primary care interns and residents report confidence in their ability to counsel patients on diet (Aspry et al., 2018). These gaps in training are realized in clinical practice: a 2023 national survey of over 3,000 U.S. adults found that fewer than half reported receiving nutrition-related counseling or screening for food insecurity from their primary care providers, despite their strong support for clinician involvement in promoting healthy eating (Ridberg et al., 2025). Both emerging findings regarding the link between food and nutrition insecurity and chronic disease and public support for dietary healthcare have

catalyzed interest in novel healthcare-based strategies for addressing nutrition. One increasingly popular and promising approach is Food is Medicine.

The Origin and History of Food is Medicine

At its core, Food is Medicine (FIM), also referred to as Food as Medicine (FAM), represents a series of strategies and interventions that use nutritious food to prevent, manage, or treat chronic disease. While food has long been used for healing throughout history, the modern FIM movement emerged in response to gaps in traditional healthcare, particularly among populations facing barriers to adequate nutrition. Early examples of FIM can be traced to the 1960s, when Dr. Jack Geiger began prescribing food to his malnourished patients while working at a community health center in Mississippi. When questioned by state officials about this approach, Dr. Geiger responded, “The last time I looked at my textbooks, the most specific therapy for malnutrition was food” (Volpp et al., 2023). This approach of framing food as a medical treatment reemerged during the HIV/AIDS epidemic of the 1980s, when community-based organizations (CBOs)—nonprofit entities that offer services to support community members’ needs, often acting as a social safety net—began providing medically tailored meals to individuals experiencing disease-related malnutrition. At the time, many people living with HIV/AIDS were unable to meet their nutritional needs due to illness, stigma, and poverty (Volpp et al., 2023). CBOs such as Project Angel Food continue to play a central role in FIM efforts today, highlighting the movement’s roots in community-led responses to unmet health needs.

While early FIM efforts arose largely in response to acute nutritional need and gaps in traditional healthcare, the contemporary movement represents a shift toward embedding nutritious food-based interventions within the healthcare system. Recently, FIM has grown from primarily CBO-led responses to malnutrition into a formal strategy for chronic disease

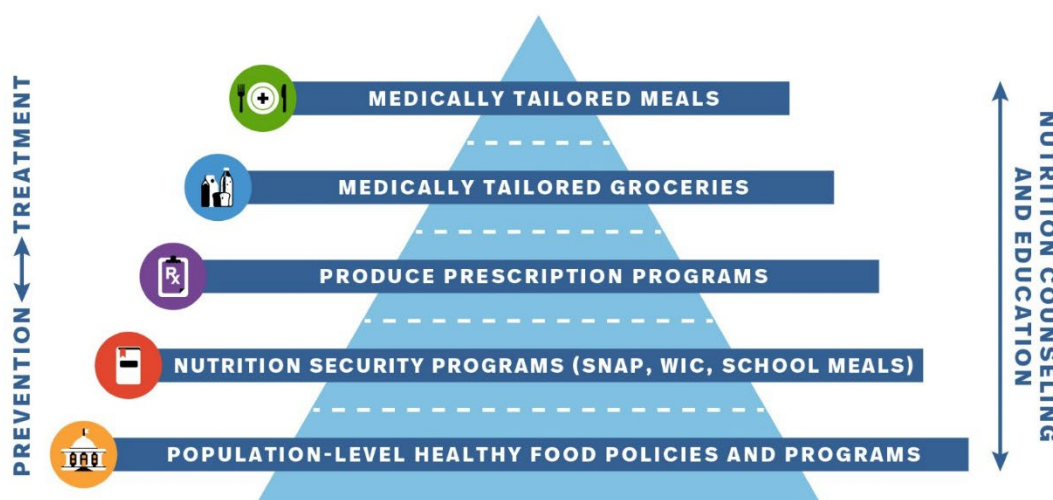
prevention and management. This reflects increasing awareness of the role that diet plays in driving health outcomes. This shift has been driven by growing rates of diet-related chronic disease, higher healthcare costs, and more discussion about food and nutrition as critical determinants of health.

There is increasing demand by healthcare and public health institutions for a standardized FIM definition. In response, the American Heart Association has defined FIM as the “provision of healthy food resources to prevent, manage, or treat specific clinical conditions in coordination with the health care sector” (Volpp et al., 2023). Across the literature base, consensus definitions of FIM seem to highlight three key components: the provision of nutritious food, a focus on specific diet-related conditions, and coordination with healthcare systems. These elements work together to position FIM as both a preventive and medical approach that surpasses nutrition education or dietary advice alone, addressing the structural barriers to accessing the foods necessary for chronic disease treatment and prevention.

Food is Medicine Models

FIM is comprised of a range of intervention models that vary in intensity, delivery, and target population but share the common goal of improving health outcomes through the consumption of nutritious food. These interventions are most commonly designed for individuals with diet-related chronic disease, although sometimes include food insecurity as an eligibility requirement (Mozaffarian et al., 2022; Volpp et al., 2023). While program implementation varies across settings, FIM interventions are largely categorized into three core types: medically tailored meals, medically tailored groceries, and produce prescriptions (See Figure 1.1; Mozaffarian et al., 2022; Volpp et al., 2023).

Figure 1.1 Food is Medicine Pyramid



Source: Tufts University Food is Medicine Institute, August 2023 FIM Fact Sheet

Medically tailored meals (MTM) represent the most intensive type of FIM intervention; MTM are fully prepared meals (either fresh or frozen) designed to meet the specific dietary requirements of individuals with severe and/or complicated chronic conditions, such as renal disease or certain forms of cardiovascular disease. These meals are prepared using medical culinary guidelines and are tailored to an individual's clinical diagnoses and possible dietary restrictions (Mozaffarian et al., 2022). MTM programs typically target patients with the highest clinical and food assistance needs, frequently timed with hospital discharges (Volpp et al., 2023). Medically tailored groceries (MTG), on the other hand, are a less intensive approach that is more easily customizable. Rather than providing prepared meals, patients receive nutrient-dense food items such as fresh produce to improve fruit and vegetable consumption, supporting chronic disease management. This approach offers more patient choice, as it allows greater versatility in food provision and patients are able to prepare their meals independently. These programs are

often accompanied by supplemental nutrition education classes or materials. Compared with MTM, MTG can be less resource-intensive and easier to scale; however, it is important to keep in mind that they require more effort from patients in regard to having the time, equipment, and skills necessary to prepare food. Finally, produce prescription (PRx) programs provide patients with a “cashlike” incentive, such as vouchers, tokens, or debit-style cards to redeem fruits and vegetables from a variety of food vendors either in person or online (Mozaffarian et al., 2022; Volpp et al., 2023). Patients can present their cashlike benefit to redeem either produce or other nutritious food items. One popular method for this type of benefit is tokens that are used at local farmer's markets, supporting both patient redemption of healthy foods and local food producers and agriculturalists. These programs are commonly referred to as the least intensive but do require significant planning for implementation as they rely on partnerships for food provision and technical support for client tracking.

FIM programs often incorporate nutrition education and counseling as a supplementary service (see Figure 1.1). These resources aim to approve food and cooking literacy within patients as well as support sustained behavior change through peer support in group settings (Mozaffarian et al., 2022). While literature suggests that nutrition education can strengthen the effectiveness of FIM programs at improving health outcomes (cite incoming publication from FAM3), some studies state that education alone is insufficient in significantly improving health outcomes, especially when individuals lack consistent access to healthy food. Beyond intervention types, there are a few other modalities of food provision and access to healthy food that bolster FIM work. For example, federal nutrition programs such as SNAP and WIC, which largely work to improve food security, synergize well with FIM’s goal of increasing access to healthy food and offer baseline for implementation. Additionally, WIC is an important

predecessor to FIM, leading the way for nutrition initiatives that require collaboration from the healthcare system through referrals. Finally, population-level food and nutrition policies and programs lay the groundwork for interventions like FIM. Large systems-wide tactics are imperative to support nutrition programs at a national level, allowing for the implementation of programs that include initiatives like FIM (Mozaffarian et al., 2022).

Food is Medicine Literature: Where We Are Now

There is a growing body of evidence examining the effectiveness of FIM interventions in improving food access, diet quality, and health outcomes among individuals with diet-related chronic disease. Much of the existing research focuses on outcomes such as food security, dietary intake, healthcare costs, and clinical indicators such as A1c and blood pressure. While the literature base overall is still expanding, the latest findings suggest that FIM interventions can offer significant benefits for individuals facing chronic disease and food insecurity. For example, a recent systematic review of MTM programs found that participants were significantly more compliant with dietary changes suggested by their healthcare provider compared to patients not in these programs. With increased adherence to dietary change, patients were more likely to experience improvements in health outcomes, such as reduced A1c values, lower blood pressure, and weight loss (Chen et al., 2022). Beyond patient-specific improvements, FIM interventions such as MTM may have major implications on the healthcare system itself. Results from the systematic review showed that resource and healthcare utilization could be drastically reduced from the clinical improvement demonstrated by participants; these improvements could potentially result in decreased hospitalization costs by \$1-8B, fewer hospital admissions, and shorter length of stays saving upward of \$230,000 per 100 patients. From the decrease in A1c alone, the U.S. could save \$11-20 billion in healthcare costs (Chen et al., 2022).

Despite these promising results, FIM literature is characterized by multiple methodological limitations. Many studies rely on self-reported data, include small sample sizes, and evaluate short-term outcomes. Additionally, heterogeneity in intervention type, eligibility criteria, and program intensity complicates cross-study comparison and limits generalizability. Evidence on long-term health outcomes and sustained cost savings remains limited, highlighting the need for standardized implementation practices and evaluation frameworks as FIM interventions continue to grow across the country (Volpp et al., 2023).

Public Perception and Awareness of Food is Medicine

While clinical and financial outcomes are important in evaluating FIM interventions, broader adoption also depends on public awareness and support for integrating food into healthcare. Ultimately, public perception influences policy decisions, payor participation, and broader acceptance of food-based health interventions. Recent national survey data suggests growing public awareness and support for FIM. In a 2025 article examining public attitudes and awareness of FIM, findings show that despite limited initial awareness of the interventions, the public overwhelmingly supports food-based treatments for chronic disease prevention and management (Ridberg et al., 2025). Respondents also expressed a willingness to support both public and private investment in FIM programs through insurance companies and public insurance programs such as Medicaid and Medicare. While respondents expressed the importance of nutritious food in maintaining one's health, less than half reported receiving clear dietary advice from their primary care provider, and even fewer reported seeing a registered dietitian (16.8%; Ridberg et al., 2025). These findings suggest that FIM interventions are not only clinically promising but also considered socially acceptable, which incentivizes policy and healthcare system adoption.

Food is Medicine in Practice

Beyond public awareness and support, the expansion and widespread adoption of FIM ultimately hinges on the translation of food-based interventions into practical and scalable healthcare delivery models. Recently, FIM has begun to transition from pilot interventions to formal healthcare and policy initiatives, particularly through Medicaid and other federal programs. States have leveraged Medicaid Section 1115 waivers to test innovative approaches that address social determinants of health, including nutrition supports such as FIM interventions. 1115 waivers allow states to implement short-term demonstrations not normally covered by traditional Medicaid in order to assess new models of healthcare delivery. In contrast, In Lieu of Services (ILOS) allow Medicaid managed care organizations (MCOs) to provide novel services as substitutes for covered services when they are expected to prove cost-effective and improve health outcomes. Unlike 1115 waivers, ILOS can be incorporated into managed care contracts and leverage the administrative functions of MCOs for rapid scaling.

In parallel to Medicaid mechanisms, federal nutrition policies have supported national FIM interventions. The USDA's Gus Schumacher Nutrition Incentive Program (GusNIP) provides funding to increase fruit and vegetable consumption low-income populations through nutrition incentive programs and produce prescriptions. Although GusNIP operates outside the healthcare reimbursement system, it has played a pivotal role in expanding FIM nationwide and has informed the design of produce prescription models embedded in healthcare. Together, these policy mechanisms demonstrate the variety of pathways through which FIM has begun to move from community-based pilots to system-level implementation.

Despite this growing policy support, sustainable financing and reimbursement remain key challenges for FIM implementation. Many programs rely on short-term grants and philanthropic funding, which limits scalability and long-term sustainability. Variability in state Medicaid

policies and managed care processes further contribute to inconsistent access to FIM services. As these interventions become more integrated within healthcare systems, questions regarding cost-effectiveness and return on investment have become increasingly prevalent. These financial and policy constraints have also shaped broader debates about how FIM should be conceptualized, which has raised important questions about whether FIM is best framed as medical treatment, an extension of the social safety net, or both.

Academic discourse regarding how FIM should be framed has intensified due to the growth of these interventions. A growing body of research asserts that FIM is intended to function, at its core, as a clinical intervention designed to prevent or treat chronic disease rather than as a supplement to food and nutrition assistance programs (Schwartz et al., 2025). From this perspective, researchers argue that clearly distinguishing FIM from the social safety net is essential for securing healthcare reimbursement and obtaining political and financial support. On the other hand, some researchers and practitioners have raised the concern that medicalizing food access puts disproportionate burden on CBOs, which have historically served as the backbone for food assistance efforts (Lumpkin et al., 2025). Some warn that FIM interventions rely too heavily on the infrastructure, labor, and community trust of CBOs without providing appropriate reimbursement or capacity-building support. This threatens the sustainability of the very organizations tasked with implementing these interventions (Lumpkin et al., 2025). From this perspective, framing food as a medical treatment may diminish its function as a basic human right and weaken the social safety net if FIM programs supplant, rather than support, food assistance initiatives.

This discourse highlights an ongoing tension at the core of FIM implementation: balancing the medical legitimacy of these strategies and scalability afforded by healthcare integration with

community-centered approaches that recognize food access as a determinant of health and a human right. This tension is particularly felt by CBOs such as food banks, which are increasingly being called upon to deliver FIM interventions. As FIM continues to expand, food banks are tasked with more formal roles within healthcare partnerships to provide medically tailored food, coordinate referrals, and support patients with wraparound services, often without guidance on financing and operations support. This comes at an increasingly turbulent time for food banks, who have experienced severe funding cuts during the second Trump administration (Bloom, 2025). Navigating this complex role as a main provider of FIM services has significant implications for reimbursement, CBO sustainability, and the long-term framing of FIM within U.S. health policy, ultimately highlighting the importance of evaluating structured clinic-food bank partnerships such as the Food as Medicine 3.0 (FAM3) program.

Food as Medicine 3.0 Grant Program

FAM3 is the third phase of a multi-year FIM initiative led by Feeding America, the country's largest hunger relief organization. In 2019, Feeding America and Elevance Health Foundation, the philanthropic arm of the insurance provider, launched their Food as Medicine partnership to support healthcare organizations in screening for food insecurity and connecting patients to food assistance resources. Central to this effort has been the development of formal partnerships between food banks and healthcare providers across the country, positioning food banks as key CBOs in the delivery of FIM interventions.

Through consecutive program phases, the partnerships have supported a range of clinic-community integration strategies, such as the establishment of food pantries within hospitals and clinics, home delivery of medically tailored foods, nutrition education programming, and produce prescription initiatives. FAM3 has expanded these efforts by funding over twenty food

banks from the Feeding America network to implement FIM across 13 states and Washington, D.C. Collectively, participating food banks and healthcare partners have screened more than one million people for food insecurity, provided medically tailored food to over 160,000 patients, and assisted more than 35,000 individuals with enrollment in SNAP as of early 2026. Due to its reach and scale of implementation, FAM3 represents one of the largest coordinated FIM initiatives in the United States. According to Feeding America, the program constitutes the largest evaluation of a nationwide FIM effort to date. To support the rigorous evaluation of program implementation and outcomes, Feeding America partnered with the Center for Nutrition & Health Impact (CNHI) to lead the evaluation process.

The Center for Nutrition & Health Impact

CNHI is a nonprofit research institute specializing in the evaluation of public health programs, with a particular focus on nutrition and physical activity. Founded in 1973 as the Swanson Center for Nutrition, Inc., CNHI has more than five decades of experience providing scientific and evaluation expertise to partners across the United States. The Center's work is guided by a vision of nutrition security and health equity for all. With a fully remote staff of over 60, CNHI maintains a strong national presence and boasts a diverse portfolio of nutrition initiatives. Currently, the Center serves as the evaluation partner for numerous large-scale public health programs across the country, including the USDA National Institute of Food & Agriculture (NIFA)'s Gus Schumacher Nutrition Incentive Program (GusNIP), the WIC Online Ordering Initiative, and multiple FIM programs in collaboration with national partners such as the American Heart Association, Feeding America, and the Rockefeller Foundation.

As a Research Associate at the Center, I support program evaluation activities including data collection, data management, quantitative and qualitative analysis, and manuscript

development. Since joining CNHI in 2024, I have contributed to several FIM projects, including *Linking Programmatic and Contextual Factors with Improved FIM Engagement Across the U.S.* (in partnership with the American Heart Association), *Food is Medicine Impact Monitoring, Evaluation, and Learning* (with the Rockefeller Foundation), and *Food as Medicine 3.0 (FAM3) Evaluation: Assessment of Longitudinal Impacts and Implementation Best Practices* (with Feeding America and the Elevance Health Foundation).

The FAM3 evaluation is supported by a multidisciplinary team of more than ten researchers who have contributed to the project since 2023. The evaluation is led by Dr. Eric Calloway and Dr. Christopher Long, who serve as the primary investigators. Additional team members contributing to the design, implementation, and analysis of the evaluation include Dr. Bailey Houghtaling, Dr. Betsy Anderson Steeves, Dr. Eliza Short, Dr. Victoria Zigmont, Nicole Cawrse, Ashleigh Floyd Clark, Clare Milburn Atkinson, Maryan Isack, Laura Flournoy, Grace Stott, Sueny Paloma Lima Dos Santos, and myself, Gabrielle Talavera. My Applied Practice Experience for the Master of Public Health program has been supervised by Dr. Victoria Zigmont, a Health Services Research Scientist at the Center, who has served as my preceptor throughout the practicum period. Dr. Zigmont holds a Master of Public Health from Southern Connecticut State University and a PhD in Public Health (Epidemiology) from Ohio State University. She currently serves as an officer within the American Public Health Association Food and Nutrition Section and has authored more than forty peer-reviewed publications.

My APE activities were designed to support the FAM3 evaluation by translating complex baseline data into program-specific insights for participating food banks. As part of the evaluation, baseline survey data were collected from over 2,500 participants across multiple sites, capturing information on dietary habits, health diagnoses, participation in public assistance

programs, quality of life measures, and other indicators relevant to food and nutrition insecurity and chronic disease. While this information was key to the overarching evaluation, there was also a recognized need to ensure that results were accessible and meaningful to food bank implementers who played a primary role in data collection and program implementation.

The primary objective of my APE was to analyze the baseline survey data and develop tailored, site-specific program one-pagers that reflected the unique contexts and participant populations of each food bank. This process culminated in the creation of more than twenty individualized one-pagers, each synthesizing findings related to participant needs and program reach. The development of these deliverables was conducted collaboratively by meeting with food bank implementers and staff from the Feeding America national office to ensure that the one-pagers accurately reflected the needs of each food bank. The primary motivation for this work was to promote data transparency and reciprocity in the evaluation process. The food bank grantees invested substantial time and resources in collecting survey data, and the APE activities were intentionally structured to return value to these organizations. By providing clear, site-specific summaries of baseline findings, the one-pagers offered food banks evidence of the needs their programs were addressing and the populations they were serving. In addition to supporting internal program reflection and learning, these materials were designed to function as valuable tools for external communication, including grant writing and fundraising efforts, ultimately contributing to the sustainability of these FIM programs beyond the grant period.

Chapter 2: Learning Objectives, Project Description, Methods

The overarching goal of this Applied Practical Experience (APE) was to translate baseline evaluation data from the FAM3 program into site-specific, actionable deliverables for participating food banks. This project sought to promote data transparency, support reciprocal engagement with community-based grantees, and develop a tool to assist food banks in conveying program need and impact for sustainability and fundraising efforts. This chapter outlines the specific learning objectives for this project and describes the methodological processes used to complete each objective.

Learning Objectives

1. *Analyze baseline data from FAM3 surveys using statistical software to examine participant demographics, perceived health status, food insecurity, dietary behaviors, public assistance participation, healthcare utilization, and quality of life across sites.*

A total of 3,134 baseline surveys were included in the preliminary dataset. Surveys consisted of a standardized set of questions administered across all sites, supplemented in some cases by site-specific items requested by food bank grantees. The standardized survey consisted of the following measures: participant demographics, chronic health conditions, self-reported health status, healthcare utilization and access, participation in public assistance programs, dietary habits (including fruit and vegetable consumption), food insecurity, and quality of life. These survey items were adapted from validated tools, such as the Hunger Vital Sign screening instrument and the EQ-5D-5L quality of life measure. Once the data were ready, several measures were taken to clean and prepare the data for analysis. Surveys were excluded if they met defined exclusion criteria, such as “speeding” (defined as completion times below a threshold calculated using average adult reading times and survey word count), respondents

failing to meet program eligibility criteria, and duplicate survey submissions. Data were then compiled into a centralized Excel workbook with consistent variable naming conventions. Unique participant identifiers (PIDs) were used to facilitate tracking for follow-up. Data were then stratified by food bank and program site, if applicable. Descriptive statistical analyses were conducted using R and Stata. For categorical variables, frequencies and proportions were determined. For continuous variables, summary statistics were calculated. Analyses were conducted at the food bank level to produce site-specific summaries. No inferential statistical tests were performed as the purpose of this analysis was to characterize baseline participants.

2. Interpret analysis outputs and translate findings into tailored, site-specific baseline program summaries.

Following data analysis, key data were identified for inclusion in each food bank's baseline one-pager. Selection of data was guided by its relevance to FAM3 program goals, site variability, and utility for communication and fundraising. Examples of highlighted indicators include chronic disease prevalence, frequency of emergency department visits and overnight hospital stays, baseline fruit and vegetable consumption, rates of public assistance utilization, and demographic characteristics, such as race, gender, and age group. A standardized template for the one-pagers was developed using Canva to ensure visual consistency across sites while allowing for the customization of data. Each one-pager included program overview and model summary, participant reach metrics (pulled from an existing dashboard), visualizations of survey findings, participant quotes (when applicable), and site-specific photos.

3. Collaborate with food banks and Feeding America National Office (FANO) to collect and integrate feedback on draft baseline one-pagers.

Initial draft one-pagers were presented during the scheduled Summer 2025 Action Period (AP) meetings, which are attended by individual food bank grantees, the CNHI evaluation team, and FANO staff. These meetings are intended to be used as structured opportunities to discuss implementation progress, review program updates, and answer questions. Following the AP meetings, the one-pagers and documents overviewing supplementary data options were distributed via email for additional internal review by relevant food bank staff. Food banks were asked to request edits, alternate data selections, and clarification within an allotted review period.

4. Revise baseline one-pagers based on feedback and disseminate final deliverables.

Requested revisions were implemented in Canva, ensuring consistency across sites with the standardized template while also accommodating grantee preferences. All drafts required some level of editing due to template-level modifications (for example, funder acknowledgement language and explanatory footnotes) that were applied across all sites to maintain uniformity. Finalized baseline one-pagers were distributed via email to the food banks, and consent was requested for inclusion of finalized materials in this report; twelve food banks provided written approval. In total, twenty site-specific baseline one-pagers were produced and disseminated as part of this APE project. One food bank did not receive a baseline one-pager because it administered a site-specific survey focused on program satisfaction, designed to accommodate the vulnerability of its pediatric participants.

Chapter 3: Products & Results

Results from this APE were derived from three primary sources: (1) baseline survey analysis, (2) development of tailored one-pagers, and (3) reflection on the project planning and implementation process. Baseline survey findings characterize the participant population served by the FAM3 program. The one-pager development process provided practical insights into best practices for translating quantitative findings into audience-specific communication tools. Finally, retrospective assessment of project planning and implementation provided insights into stakeholder engagement and cross-sector coordination.

Baseline Survey Results

Among the 3,000+ baseline survey respondents included in the analysis, 86% screened positive for food insecurity and 68% reported at least one diagnosed chronic condition. These findings are consistent with the intended population for FIM programming, which prioritizes individuals experiencing diet-related chronic disease and/or food insecurity. Demographic characteristics of participants are presented in Figure 3.1. Age distribution was relatively even, with approximately one-quarter of respondents in each defined age group. The majority of participants identified as women (73%) and 83% reported English as their primary language. Participants predominantly identified as Black or African American (38%), Hispanic or Latino (27%) or White or European American (26%). Slightly over half of respondents (53%) reported having children in their household. Public assistance participation varied across programs: 38% reported receiving SNAP benefits and 13% reported participation in WIC. More than half (56%) were enrolled in Medicaid and/or Medicare. Regarding health conditions, high blood pressure was the most common diagnosis (47%), followed by diabetes or pre-diabetes (38%), and high cholesterol (32%).

Demographic	Percent (%)
Age Group	
18-34	25%
35-47	25%
48-59	25%
60-88	25%
Gender Identity	
Man	26%
Woman	73%
Some other way	1%
Language	
English	83%
Spanish	16%
Other	1%
Race/Ethnicity	
Black or African American	38%
Hispanic or Latino	27%
White or European American	26%
Multi-racial/ethnic	4%
Asian or Asian American	2%
American Indian or Alaskan Native	1%
African	< 1%
Middle Eastern or North African	< 1%
Native Hawaiian or Pacific Islander	< 1%
Children in Household	
Yes	53%
No	47%
SNAP Recipient	
Yes	38%
No	62%
WIC Recipient	
Yes	13%
No	87%
Medicaid and/or Medicare Recipient	
Yes	56%
No	44%
Health Conditions	
High Blood Pressure	47%
Diabetes/Pre-diabetes	38%
High Cholesterol	32%
Heart Disease	9%

Cancer	5%
Kidney Disease	5%
Stroke	4%

Forty-two percent of participants rated their overall health as ‘fair’ or ‘poor,’ as opposed to ‘good,’ ‘very good,’ or ‘excellent’ health. Healthcare utilization in the preceding three months was significant: approximately 40% reported at least one visit to the emergency room, and nearly one quarter required an overnight hospitalization. Despite high healthcare utilization, cost-related barriers to care were common. Twenty-six percent of participants reported delaying or skipping medical care and 25% went without necessary medication due to financial barriers. Dietary intake behaviors indicated limited adherence to national nutrition guidelines. Approximately two-thirds of respondents reported consuming vegetables either one to three times or not at all in the prior week. Similar findings were observed for fruit consumption, with 58% reporting intake one to three times per week or less.

Development of Tailored One-Pagers

The development of site-specific baseline one-pagers required the application of health communication principles and collaboration across multiple stakeholder groups. The process was guided by best practices outlined in “Strategies for Effective Public Health Communication in a Complex Information Environment” (Niederdeppe et al., 2024) and the Centers for Medicare & Medicaid Services’ (CMS) “Guidelines for effective writing.” The development process was comprised of four core steps: (1) identification of the intended audience, (2) selection of an appropriate communication format, (3) tailoring of key messages, and (4) stakeholder engagement.

The primary audiences for the one-pagers were food bank implementers and potential funders. As such, materials were designed to balance analytic messaging with accessibility,

ensuring that findings were presented clearly while highlighting data most relevant to program implementation and funding justification. A one-pager format was selected to facilitate concise communication and usability in grant applications, donor outreach, and program reporting. Language and visual design were tailored to reflect a professional tone appropriate for organizational and philanthropic audiences, while maintaining participant-centered framing. Data was presented using clear, active language that emphasized the lived experiences and health needs of participants. Visual elements such as bar charts and summary statistics were included to maximize interpretability for non-technical audiences. The development process highlighted the importance of cross-sector collaboration in public health communication. Draft materials were reviewed with healthcare partners, food bank implementers, grant administrators, and funder representatives to ensure accuracy and alignment with stakeholder priorities. At times, competing interests occurred, such as between emphasizing clinical terminology and maintaining accessibility, or emphasizing need and highlighting program success. Navigating these complications required consensus-building across stakeholders and iterative revision. Overall, the one-pager development process provided insights into the complexities of translating evaluation findings into meaningful, public-facing materials. Examples of finalized baseline one-pagers are included in the appendices.

Project Planning and Implementation

Project planning was initiated through the development of a structured process map (see Appendix 3), which outlined the timeline, phases, and deliverables associated with the project. The process map identified five sequential phases of the project, four of which culminated in defined outputs. Tasks were categorized by the responsible individual or entity. This systems thinking tool served as a framework for coordinating data analysis, deliverable development, and

stakeholder engagement. Implementation resulted in the successful completion and dissemination of twenty tailored one-pagers. Feedback from food bank grantees and representatives from FANO indicated that the materials were perceived as useful for internal communication, partner engagement, and fundraising efforts. The adaptability of the one-pager format and flexibility during the revision process were noted as strengths. The positive reception of these materials informed subsequent program reporting for FAM3, including the incorporation of one-pager case studies into the grant's culminating report to illustrate changes in participant outcomes between baseline and follow-up periods. Retrospective review identified areas for improvement in planning and implementation. First, additional time allocated for stakeholder review would have strengthened the revision process. The number of individuals requiring approval, such as marketing and communications professionals, organizational leadership, and funder representatives, exceeded initial projections which extended the feedback timeline. Second, expanded opportunities for structured stakeholder engagement may have facilitated earlier alignment across stakeholders and reduced the need for late revisions. Finally, greater detail within the process map may have improved visibility of level of effort and enhanced reproducibility for future similar projects.

Chapter 4: Discussion

The planning and development of tailored baseline one-pagers for the FAM3 program revealed important insights into several key dimensions of public health practice, including program evaluation, health communication, and cross-sector collaboration. The activities associated with this APE supported the development of technical and interpersonal skills central to public health practice. Analytical tasks such as conducting descriptive statistical analyses in R and Stata strengthened quantitative evaluation skills, while the interpretation and translation of findings into accessible communication materials reinforced the importance of effective communication. Additionally, the collaborative development of stakeholder-facing deliverables highlighted the role of reciprocity and data transparency in program evaluation partnerships, particularly when working with community-based organizations responsible for implementation.

Interpretation of Survey Findings

The baseline survey findings provided further insight into the population served by FAM3. Consistent with the literature on food insecurity and chronic disease, the majority of participants reported both food insecurity and at least one chronic health condition. These findings align with previous research demonstrating the strong relationship between inadequate access to nutritious food and diet-related chronic disease, particularly among marginalized communities. The demographic composition of the participants further reflects broader patterns of health inequities in the U.S., where systemically excluded communities experience disproportionate burdens of food insecurity and chronic illness.

One notable finding was the relatively low reported participation in SNAP and WIC, despite the high prevalence of food insecurity. This observation aligns with existing literature documenting the gap between eligibility and enrollment in public assistance programs (Lanese et

al., 2018). Administrative burden, documentation requirements, and perceived stigma associated with government assistance programs have been identified as barriers to enrollment, particularly among populations with low socioeconomic status or immigration-related concerns.

Additionally, program eligibility requirements and work mandates may limit access for individuals managing chronic illness or caregiving responsibilities. The discrepancy between high food insecurity and lower program participation suggests that gaps in program outreach, accessibility, or administrative processes may contribute to unmet need within certain populations.

Healthcare utilization patterns observed in the survey data further illustrate the intersection of food insecurity, chronic disease, and healthcare costs. A substantial proportion of respondents reported recent emergency department visits and overnight hospitalizations, while many also indicated delaying or forgoing medical care due to cost barriers. These findings are consistent with previous research linking food insecurity with increased healthcare utilization and poor health outcomes. Individuals experiencing food insecurity may delay preventive or routine care due to competing financial priorities, resulting in greater reliance on emergency services when their symptoms worsen. These patterns reinforce the importance of upstream interventions such as FIM that address social determinants of health.

Dietary intake patterns reported by participants provide additional context for understanding these health outcomes. The overwhelming majority of participants reported consuming fruits and vegetables infrequently, falling well below the intake levels recommended by national guidelines. These findings are consistent with the literature base demonstrating that individuals experiencing food insecurity often face structural barriers to obtaining produce, including cost, transportation challenges, and limited availability. Qualitative findings from the

semi-structured interviews conducted as part of the broader evaluation provided additional context, with participants frequently citing financial constraints, limited knowledge of food preparation, and taste preferences as barriers to fruit and vegetable consumption.

Taken together, the baseline findings highlight the lived experiences of individuals managing both poverty and chronic illnesses. Participants often described navigating competing priorities related to food, healthcare, and other basic needs. These circumstances create a cycle in which limited access to nutritious food contributes to worsening health conditions, which in turn limit employment opportunities and financial stability. Within this context, FIM interventions represent a promising approach to addressing both dietary risk factors and broader social determinants of health.

Lessons from Project Planning and Implementation

The planning and implementation of this project revealed important lessons regarding cross-sector collaboration and project management within public health initiatives. FIM programs inherently require coordination between healthcare providers, community-based organizations, philanthropic partners, and researchers. Aligning the priorities of these stakeholders requires careful communication and flexibility, particularly when developing materials that must satisfy diverse audiences.

The process map developed during project planning proved valuable for organizing tasks and identifying key phases of implementation. However, retrospective review suggests that additional time for stakeholder review and greater detail in planning documentation would have strengthened the implementation process. As the project progressed, the number of stakeholders involved expanded, which increased the time required for feedback and revision. These

experiences underscore the importance of incorporating sufficient time for stakeholder engagement and iterative review when planning multi-stakeholder projects.

The development of the site-specific one-pagers demonstrated the value of translating evaluation findings into accessible materials that can support program sustainability. This collaborative process highlighted the important role food banks play in FIM programming to serve populations with complex health and social needs while operating with limited resources. Providing tailored summaries of participant data allowed food banks to better understand the populations they serve, while also offering a tool that can be used in fundraising, partner engagement, and program reporting. Additionally, the development process provided practical insight into the role of marketing and health communication in public health initiatives. Producing materials for external audiences required careful attention to branding, visual consistency, and organizational identity across partners. Because the deliverables represented a collaborative partnership between each food bank, Feeding America, and Elevance Health, it was necessary to ensure that visual and written elements aligned with branding guidelines and communication priorities of each organization. This included maintaining consistency in logos, color palettes, and messaging while also preserving clarity and accessibility. This process underscored how health communication must balance scientific accuracy with visual cohesion and branding, particularly when materials are developed through grant funding. This project illuminated how evaluation activities can extend beyond traditional academia to support organizational capacity and sustainability by translating findings into accessible communication materials that enable broader dissemination and practical application.

Limitations

Several limitations should be considered when interpreting these findings. First, the baseline survey data relied on self-reported responses, which may introduce biases to the results based on recall. Second, the survey analysis was primarily descriptive in nature and therefore cannot establish causal relationships between food insecurity, dietary habits, and health outcomes. Third, while the survey sample included over 3,000 participants across the country, the findings may not be generalizable to all groups experiencing food insecurity or participating in FIM interventions. Fourth, as the standardized FAM3 survey was not administered across all program sites, not every food bank collected baseline data and therefore did not receive a tailored one-pager. Additionally, the scope of the APE activities focused primarily on baseline data analysis and knowledge translation rather than longitudinal outcome evaluation. Future analyses examining follow-up survey data are being conducted in early 2026 as part of the broader evaluation to assess the impact of the FAM3 program on dietary behaviors, food security, and health outcomes over time.

Implications for Public Health Practice and Future Directions

Findings from this APE highlighted the importance of reciprocal partnerships between evaluators and community-based organizations involved in FIM programming. As discussed in the literature review, community-based organizations such as food banks play a key role in implementing FIM services by providing food distribution infrastructure, coordinating referrals, and supporting participant engagement and wraparound services. However, researchers have also noted that the expansion of healthcare-integrated food interventions can place substantial operation and administrative burdens on these organizations. In many cases, community-based

organizations are responsible for data collection, participant recruitment, and program implementation while operating with limited financial and staffing resources.

The development of tailored baseline one-pagers represents one approach to addressing this imbalance by returning analytic value to food bank partners. By translating survey findings into accessible, site-specific summaries, the evaluation process provided food banks with concrete materials that can support partner engagement and fundraising efforts. Practices such as data transparency and the co-development of evaluation outputs can help ensure that community partners benefit directly from the data they help generate. From an evaluator perspective, these reciprocal practices are essential for building trust, strengthening partnerships, and promoting equitable evaluation practices. At the program planning and funding levels, greater attention should be given to supporting the capacity of community-based organizations involved in FIM initiatives. Future programs could incorporate dedicated resources for evaluation participation, such as funding for staff time, training in data collection, and tools that enable organizations to track their own program data. At a broader level, incorporating reciprocal practices into evaluation design may strengthen the sustainability of FIM programs by reinforcing the role of community-based organizations as essential partners rather than solely as implementation sites. As FIM continues to expand nationwide, evaluators, funders, and implementers should consider how evaluation activities can both generate evidence and support the operational needs of community-based organizations responsible for program delivery.

References

- Aspry, K. E., Van Horn, L., Carson, J. A. S., Wylie-Rosett, J., Kushner, R. F., Lichtenstein, A. H., Devries, S., Freeman, A. M., Crawford, A., & Kris-Etherton, P. (2018). Medical Nutrition Education, Training, and Competencies to Advance Guideline-Based Diet Counseling by Physicians: A Science Advisory From the American Heart Association. *Circulation*, 137(23). <https://doi.org/10.1161/CIR.0000000000000563>
- Baker, P., Machado, P., Santos, T., Sievert, K., Backholer, K., Hadjikakou, M., Russell, C., Huse, O., Bell, C., Scrinis, G., Worsley, A., Friel, S., & Lawrence, M. (2020). Ultra-processed foods and the nutrition transition: Global, regional and national trends, food systems transformations and political economy drivers. *Obesity Reviews*, 21(12). <https://doi.org/10.1111/obr.13126>
- Benavidez, G. A., Zahnd, W. E., Hung, P., & Eberth, J. M. (2024). Chronic Disease Prevalence in the US: Sociodemographic and Geographic Variations by Zip Code Tabulation Area. *Preventing Chronic Disease*, 21, 230267. <https://doi.org/10.5888/pcd21.230267>
- Bloom, I. (2025, September 14). Federal funding cuts to food program impacts communities and farmers. NPR. <https://www.npr.org/2025/09/14/nx-s1-5520824/federal-funding-cuts-to-food-program-impacts-communities-and-farmers>
- Brandt, E. J., Mozaffarian, D., Leung, C. W., Berkowitz, S. A., & Murthy, V. L. (2023). Diet and Food and Nutrition Insecurity and Cardiometabolic Disease. *Circulation Research*, 132(12), 1692–1706. <https://doi.org/10.1161/CIRCRESAHA.123.322065>
- CDC. (2024). About chronic diseases. Centers for Disease Control and Prevention. <https://www.cdc.gov/chronic-disease/about/index.html>
- Centers for Medicare and Medicaid Services. (2026). Guidelines for effective writing. CMS. <https://www.cms.gov/training-education/learn/find-tools-to-help-you-help-others/guidelines-for-effective-writing>

- Chen, A. M. H., Draime, J. A., Berman, S., Gardner, J., Krauss, Z., & Martinez, J. (2022). Food as medicine? Exploring the impact of providing healthy foods on adherence and clinical and economic outcomes. *Exploratory Research in Clinical and Social Pharmacy*, 5, 100129. <https://doi.org/10.1016/j.rcsop.2022.100129>
- Hacker, K. (2024). The Burden of Chronic Disease. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*, 8(1), 112–119. <https://doi.org/10.1016/j.mayocpiqo.2023.08.005>
- Houghtaling, B., Short, E., Long, C. R., Anderson Steeves, E. T., Isack, M., Flournoy, L., Cawrse, N., August, E., Summerfelt, W. T., & Calloway, E. (2025). Barriers and facilitators to implementing Food is Medicine programs: Evidence from 21 food bank–healthcare partnerships. *Translational Behavioral Medicine*, 15(1), ibaf013. <https://doi.org/10.1093/tbm/ibaf013>
- Lanese, B. G., Fischbein, R., & Furda, C. (2018). Public Program Enrollment Following US State Medicaid Expansion and Outreach. *American Journal of Public Health*, 108(10), 1349–1351. <https://doi.org/10.2105/ajph.2018.304592>
- Leung, C. W., Kullgren, J. T., Malani, P. N., Singer, D. C., Kirch, M., Solway, E., & Wolfson, J. A. (2020). Food insecurity is associated with multiple chronic conditions and physical health status among older US adults. *Preventive Medicine Reports*, 20, 101211. <https://doi.org/10.1016/j.pmedr.2020.101211>
- Lumpkin, J. R., Davis, M., & Stewart, V. (2025). Food For Thought: A Vision For Generative ‘Food Is Medicine’: Article examines generative Food Is Medicine. *Health Affairs*, 44(4), 391–397. <https://doi.org/10.1377/hlthaff.2024.01347>
- Mozaffarian, D., Blanck, H. M., Garfield, K. M., Wassung, A., & Petersen, R. (2022). A Food is Medicine approach to achieve nutrition security and improve health. *Nature Medicine*, 28(11), 2238–2240. <https://doi.org/10.1038/s41591-022-02027-3>

- Niederdeppe, J., Boyd, A. D., King, A. J., & Rimal, R. N. (2024). Strategies for Effective Public Health Communication in a Complex Information Environment. *Annual Review of Public Health*, 46. <https://doi.org/10.1146/annurev-publhealth-071723-120721>
- Ridberg, R., Sharib, J. R., Garfield, K., Hanson, E., & Mozaffarian, D. (2025). ‘Food Is Medicine’ In The US: A National Survey Of Public Perceptions Of Care, Practices, And Policies: Article examines the results of a national survey of US public awareness and perceptions of Food Is Medicine interventions. *Health Affairs*, 44(4), 398–405.
<https://doi.org/10.1377/hlthaff.2024.00585>
- Schwartz, C. M., Wohrman, A. M., Holubowich, E. J., Sanders, L. D., & Volpp, K. G. (2025). What Is ‘Food Is Medicine,’ Really? Policy Considerations On The Road To Health Care Coverage: Food Is Medicine policy considerations. *Health Affairs*, 44(4), 406–412.
<https://doi.org/10.1377/hlthaff.2024.01343>
- Sievert, K., Lawrence, M., Parker, C., & Baker, P. (2020). Understanding the Political Challenge of Red and Processed Meat Reduction for Healthy and Sustainable Food Systems: a Narrative Review of the Literature. *International Journal of Health Policy and Management*, 10(12).
<https://doi.org/10.34172/ijhpm.2020.238>
- USDA. (2025). Food security in the U.S. - Key statistics & graphics. USDA.gov.
<https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics>
- Volpp, K. G., Berkowitz, S. A., Sharma, S. V., Anderson, C. A. M., Brewer, L. C., Elkind, M. S. V., Gardner, C. D., Gervis, J. E., Harrington, R. A., Herrero, M., Lichtenstein, A. H., McClellan, M., Muse, J., Roberto, C. A., Zachariah, J. P. V., & on behalf of the American Heart Association.

(2023). Food Is Medicine: A Presidential Advisory From the American Heart Association.

Circulation, 148(18), 1417–1439. <https://doi.org/10.1161/CIR.0000000000001182>

Appendix

Appendix 1 - Synthesis and/or Integration of Competencies

Table A.1 Synthesis and Integration of Competencies

Competency	Description of Synthesis and Integration
<i>PHN emphasis.</i> <i>2. Compare and relate research into practice</i>	The purpose of this APE project was to translate FIM research and evaluation findings into a practical tool for program implementers. Baseline survey data on food insecurity, chronic disease, dietary behaviors, and other social determinants of health were analyzed and interpreted in the context of the existing literature base on diet-related chronic disease and FIM. These findings were then translated into site-specific baseline one-pagers designed to support program communication and fundraising efforts for food banks.
<i>21. Integrate perspectives from other sectors and/or professions to promote and advance population health</i>	This project was highly collaborative, engaging cross-sector partners involved in the broader FAM3 evaluation such as nonprofit food bank implementers, research scientists, and grant administrators. Developing the one-pagers required balancing the needs of each stakeholder while ensuring scientific accuracy and aligning with organizational branding and communication priorities.
	Systems thinking was applied through the development of a process map used to plan and visually organize the phases of this

<i>22. Apply a systems thinking tool to visually represent a public health issue in a format other than a standard narrative</i>	project. The process map displayed the relationships between tasks and stakeholders, which helped clarify responsibilities and timelines across organizations involved in the evaluation. This tool was referred to consistently throughout the course of the project and facilitated coordination among multiple stakeholders.
---	--

PHN emphasis. Compare and relate research into practice

This competency was integrated throughout the APE by linking scientific research on FIM interventions with real-world program implementation. The literature review examined evidence linking food insecurity, dietary behaviors, and chronic disease, as well as the growing role of FIM programs in the healthcare setting. During the APE, these research findings informed the analysis of baseline survey data from over 3,000 FAM3 participants. Descriptive statistical analyses were conducted to characterize the participant population, detailing aspects such as demographics, chronic disease prevalence, food insecurity, healthcare utilization, dietary habits, and quality of life indicators. Prior to analysis, substantial data cleaning was required to standardize variables across food banks sites. Inconsistent variable naming conventions and site-specific survey questions made the dataset less uniform, requiring additional steps before analysis could begin. Missing data also presented challenges, particularly for surveys administered on paper as some participants skipped questions. Addressing these issues was a vital step to ensure the reliability of analysis results. Findings from this analysis were then translated into program summaries for food bank grantees, clarifying complex quantitative findings into accessible communication tools for program planning and donor development. In

doing so, this project demonstrated how public health research and evaluation can be applied to practice to support program implementation.

Integrate perspectives from other sectors and/or professions to promote and advance population health

FIM initiatives operate at the intersection of healthcare, public health, the charitable food system, the nonprofit space, and philanthropy. Therefore, this APE required integrating perspectives from multiple professional sectors to ensure that evaluation findings were useful to a diverse group of stakeholders. The development of the one-pagers involved collaboration with an array of professionals from different fields, and each stakeholder group brought different priorities and expertise. For example, researchers emphasized analytic value and accuracy, food banks focused on how the materials could support program communication and fundraising, and funders were interested in demonstrating reach and need for program justification. Developing the finalized one-pagers meant balancing these perspectives while maintaining clarity and cohesion in the final deliverables. Overall, this experience highlighted the importance of cross-sector collaboration in advancing public health nutrition initiatives.

Apply a systems thinking tool to visually represent a public health issue in a format other than a standard narrative

Systems thinking was central to the planning and implementation of this project. Process mapping was used to guide baseline one-pager development. The process map detailed key phases of the process, including data analysis, result interpretation, development of communication materials, external stakeholder review, and final dissemination. By mapping the relationships between activities, stakeholders, and outputs, the process map clarified the sequence of tasks required to complete the project and underscored the connection between analytic and interpersonal skills. During implementation, however, the stakeholder review phase

proved more complicated than originally anticipated. The initial plan involved review and approval by a single food bank representative, but in practice the materials were circulated to additional stakeholders such as communications and marketing teams, organizational leadership, and funder representatives. While this expanded review improved organizational branding and messaging, it significantly extended the timeline for feedback and revision. This highlighted the importance of building flexibility into project timelines and reinforced the value of emphasizing community partners' autonomy. This systems-based approach supported project management and provided a visual representation of how data analysis, health communication, and stakeholder engagement comprise a broader framework for FIM evaluation.

Appendix 2 – Demonstration of Competency Attainment

Table A.2 Attainment of Competencies

Practice-based products that demonstrate competency attainment	
Specific products	Competency
Tailored Baseline One-Pagers	18. Select communication strategies for different audiences and sectors
Tailored Baseline One-Pagers	19. Communicate audience-appropriate public health content, both in writing and through oral presentation to a nonacademic, non-peer audience with attention to factors such as literacy and health literacy
Survey Analysis Output	3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
Survey Analysis Output, Tailored Baseline One-Pagers	PHN Emphasis 2. Compare and relate research into practice
Survey Analysis Output	PHN Emphasis 4. Analysis of human nutrition principles

Select communication strategies for different audiences and sectors

The baseline one-pagers demonstrate the application and selection of various communication strategies for diverse audiences involved in FIM programming. While the data analysis was conducted for evaluation purposes, the one-pagers needed to be accessible and easy to understand for those not formally trained in public health research methods. Therefore, language was kept simple to facilitate comprehension regardless of literacy levels. The one-page format was selected for a concise and visually engaging summary of findings. Visual elements such as charts and photos were used to support interpretation of data and the personalization of each deliverable. One challenge encountered in selecting appropriate communication strategies involved presenting program metrics that could appear contradictory when interpreted together at

face value. For example, several food banks reported high numbers of food insecurity screenings conducted through their healthcare partners, yet the number of patients ultimately referred to and receiving food from the program was much lower. This variation in reach reflected differences in operational capacity rather than program effectiveness. When presented without context, these metrics could inadvertently suggest low program impact. Addressing this challenge required careful framing of data and thoughtful selection of indicators to ensure that both program reach and participant need were accurately represented.

Communicate audience-appropriate public health content, both in writing and through oral presentation to a nonacademic, non-peer audience with attention to factors such as literacy and health literacy

The one-pagers also demonstrate the ability to communicate complex research findings in a format appropriate for non-academic audiences. Statistical findings were conveyed using clear narrative summaries and visual representations. Language choices emphasized clarity and readability while maintaining scientific accuracy in communicating health-related information. These materials were designed to support food banks in demonstrating community need and program impact to various stakeholders, such as organizational leadership, donors, and healthcare partners.

Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate

The baseline survey analysis outputs demonstrate competency in analyzing quantitative data using statistical and data management tools. Survey responses from over 3,000 participants were compiled, cleaned, and organized into an Excel spreadsheet. Descriptive analyses were conducted in R and Stata to summarize data such as demographics, chronic disease prevalence,

healthcare utilization, food insecurity rates, dietary behaviors, and quality of life measures. These analyses resulted in the statistical outputs that were the foundation for the interpretation and communication of findings.

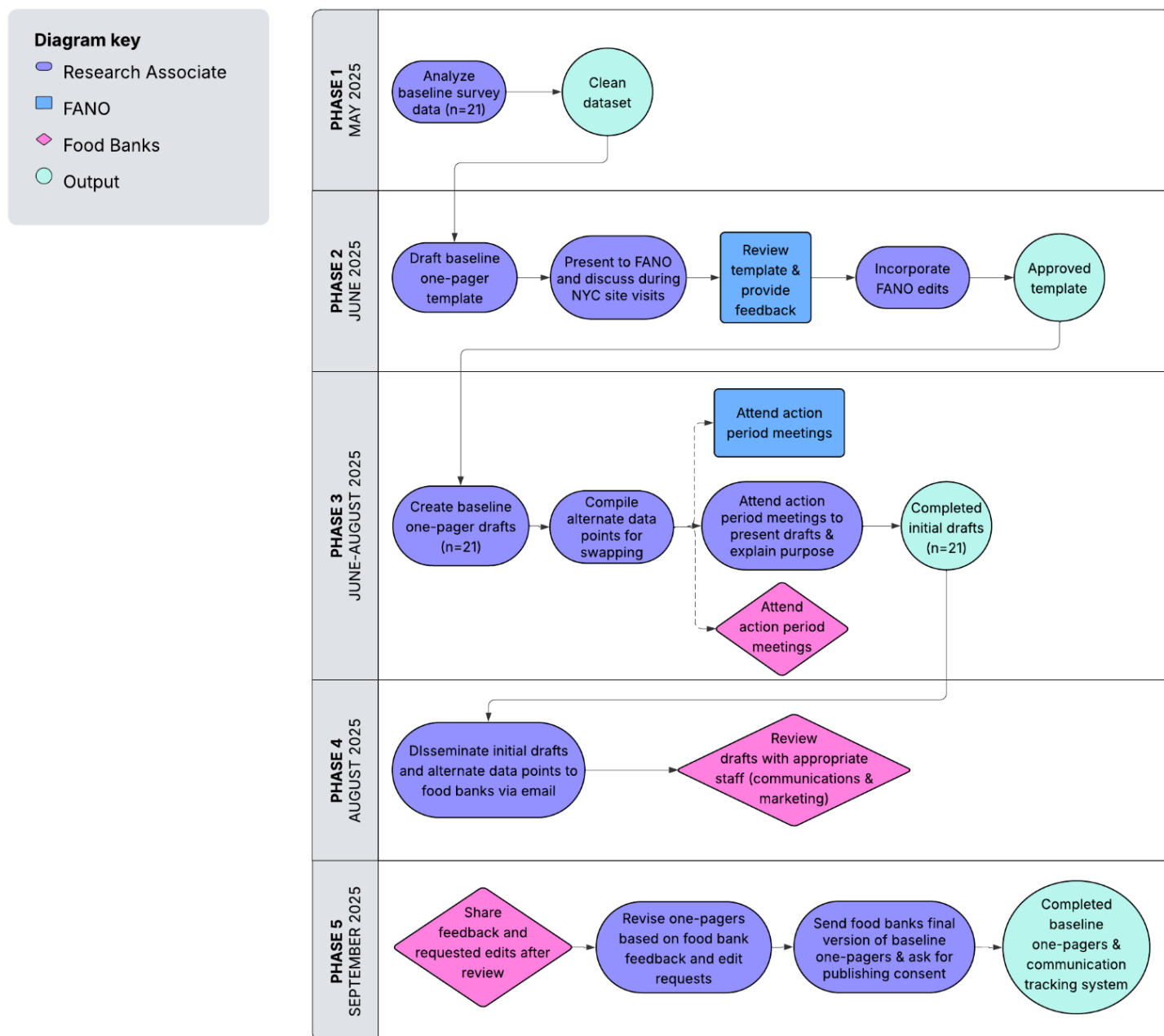
PHN Emphasis. Compare and relate research into practice

Both the analysis outputs and one-pagers demonstrate the ability to convey complex research findings into practical public health applications. Existing literature on food insecurity, diet-related chronic disease, and FIM informed the interpretation of survey results. These results were then translated into program materials that will be used by food banks to communicate program justification and community characteristics. This process shows how public health research and evaluation can ultimately inform program planning, communication, and resource development.

PHN Emphasis. Analysis of human nutrition principles

The baseline survey analysis required applying principles of nutrition epidemiology to interpret dietary patterns and health outcomes within the participant population. Measures such as fruit and vegetable consumption, chronic disease prevalence, and food insecurity status were examined to understand nutritional risk factors that impact program participants. Interpretation of these indicators required knowledge of nutritional guidelines and the relationship between diet quality, food access, and chronic disease risk at a population level.

Appendix 3 – Systems Thinking Tool: Process Map



Appendix 4 – Finalized Baseline One-Pagers



Feed More

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

Since 2018, Feed More has been partnering with local safety-net hospitals, health districts, Federally Qualified Health Centers, and free clinics to provide Food as Medicine services in the Central Virginia area. Through 30 sites in 16 localities, Feed More's partnerships focus on food insecurity screening to supply food boxes onsite and referrals to ongoing food resources.

PROGRAM MODEL

Healthcare staff at partnering organizations can provide patients who have screened positive for food insecurity with a healthy shelf stable food box to take home. Additionally, staff can refer patients to the Feed More Help Line to connect them with Feed More's network of food resources and programs, including SNAP application assistance.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

4,275+

patients screened positive
for food insecurity

~3,750

patients received food
from the program



Foundation

Feed More is a recipient of Elevance Health Foundation (Anthem Blue Cross and Blue Shield)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

QUALITY OF LIFE

Many participants are experiencing significant challenges across key areas of daily functioning and well-being:

- **Usual Activities:** 17% are moderately to severely limited or unable to perform their usual activities.
- **Pain/Discomfort:** 42% experience moderate to extreme pain or discomfort.
- **Mental Health:** 36% report feeling moderately to extremely anxious or depressed.

HEALTHCARE UTILIZATION

In the past 3 months, one-third of participants visited an emergency room. Also, approximately a quarter of participants reported delaying/skipping necessary medical services and/or running out of medications due to cost. Feed More addresses these barriers by providing healthy foods to support chronic disease management and improve overall health.



1 IN 3 VISITED THE
EMERGENCY ROOM



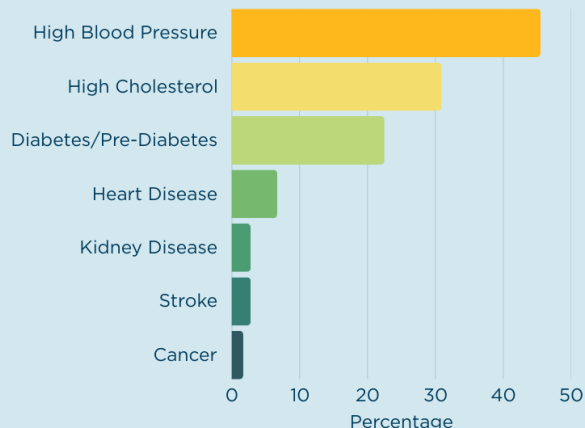
1 IN 5 COULD NOT
AFFORD MEDICAL
SERVICES OR
MEDICATIONS

Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Allison Hallberg (ahallberg@feedmore.org) at Feed More to learn more and connect.

HEALTH CONDITIONS

60% of participants who enrolled in the program reported at least one chronic condition. High blood pressure was the most prevalent, reported by just under half of participants. High cholesterol followed, reported by approximately one-third of participants. Feed More's FAM3 program is designed to treat these chronic conditions using the health benefits of nutritious foods.

*Prevalence of **Health Conditions**
Among Participants*



PUBLIC ASSISTANCE

90% of participants reported using at least one form of public assistance, such as health insurance benefits or food-purchasing programs. For example, just under half of participants are SNAP recipients and over half are on Medicaid. Participation in programs like FAM3 could improve participants' health and quality of life while reducing healthcare costs charged to Medicaid.

¹preliminary analysis of data spanning 2023-25; intervention concludes in 2026

²sample sizes may vary due to missing data



Feeding America Riverside | San Bernardino Counties

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

FoodRx is a food-prescription-based distribution service established in 2021 to reduce the adverse health conditions associated with food insecurity. Through this program, Feeding America Riverside | San Bernardino (FARSB) partners with local healthcare organizations to support food-insecure individuals, prescribing food boxes and transitioning patients to long-term food services such as CalFresh, local food pantries, and other food bank programs such as Nourish Now, the food bank's home-bound delivery program.

PROGRAM MODEL

Patients identified as food insecure by their health care provider receive a food box, consisting of staple foods items. Food prescriptions are paired with nutritional educational materials to help patients make informed decisions for their diets. Additionally, FARSB refers patients to local food pantries and meal programs, offers CalFresh Application assistance and transitions qualified patients to their homebound relief services.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

~13,000

patients screened for
food insecurity

4,000+

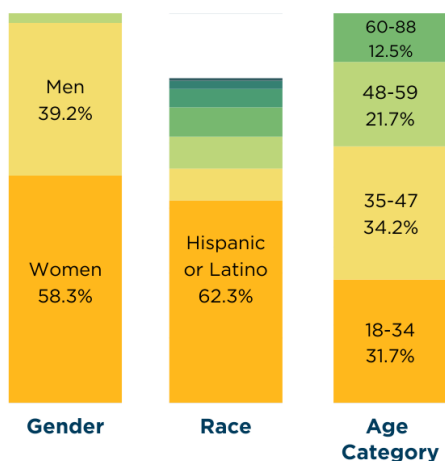
patients receiving food
from the program

Anthem  Foundation

Feeding America Riverside | San Bernardino Counties is a recipient of Elevance Health Foundation (Anthem Blue Cross)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND



A total of 125 individuals participated in the baseline FAM3 survey.² Women represented 58.3% of participants, and the average age was 42 years.

PUBLIC ASSISTANCE

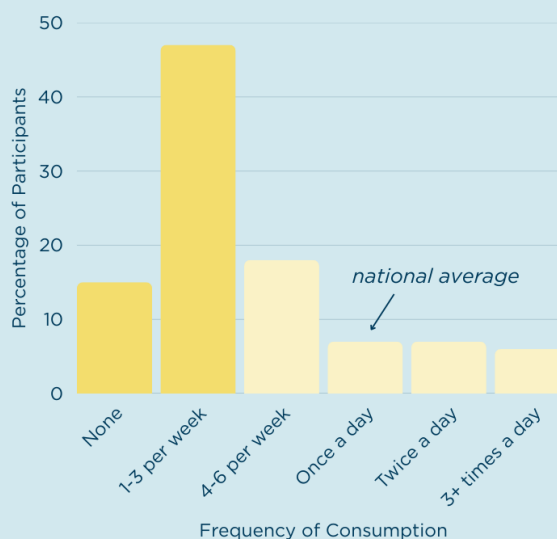
82% of participants reported using at least one form of public assistance, such as health insurance benefits or food-purchasing programs. For example, almost half of participants are SNAP recipients and over one-third are on Medicaid. Participation in programs like FAM3 could improve participants' health and quality of life while reducing healthcare costs charged to Medicaid.

Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Paulina Soria (psoria@feedingamericaaie.org) at Feeding America Riverside / San Bernardino to learn more and connect.

DIETARY HABITS

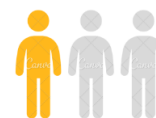
Vegetable intake was low, with 62% of participants consuming vegetables 3 times or less in the previous week; 55% reported similarly limited fruit consumption. **This is below the national average fruit & vegetable intake, which is once per day for vegetables and 1.6 times per day for fruit.** FARSB aims to support fruit and vegetable consumption by referring patients to partner agencies or the Fresh Start Pantry by Goodman, choice pantry.

During the past week, how many times did you eat **vegetables**?



HEALTHCARE UTILIZATION & ACCESS

In the past 3 months, over one-third of participants visited the emergency room, delayed or skipped medical care, or ran out of medication due to cost. FARSB addresses these barriers by providing healthy foods to support chronic disease management and improve overall health.



¹preliminary analysis of data spanning 2023-25; intervention will conclude in 2026

²sample sizes may vary due to missing data



Feeding Westchester

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

In 2018, Feeding Westchester began its Food as Medicine Program in collaboration with local medical clinics and hospital systems to reduce barriers to nutritious food access while tracking health outcomes over time.

PROGRAM MODEL

Healthcare partners screen patients for food insecurity and refer them to the Food as Medicine Program if they indicate the need for food assistance. The sites allow patients to share their health information regarding chronic illness indicators with Feeding Westchester through the Link2Feed service insights platform. In addition to food assistance, SNAP coordinators work with neighbors to make referrals. Housing and legal assistance services are also available.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

1,000+

patients screened positive
for food insecurity

~750

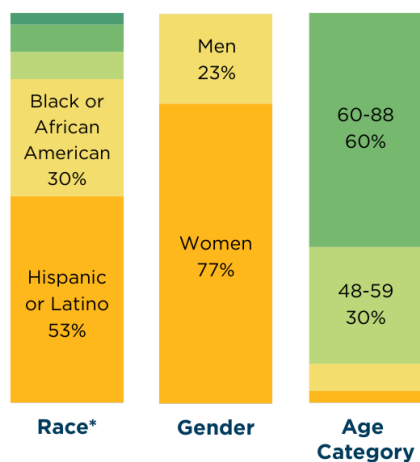
patients received food
from the program

Anthem  Foundation

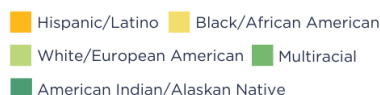
Feeding Westchester is a recipient of Elevance Health Foundation (Anthem Blue Cross and Blue Shield)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND*



A total of 30 individuals participated in the baseline FAM3 survey.² Women represented 77% of participants, and the average age was 60 years.

PUBLIC ASSISTANCE

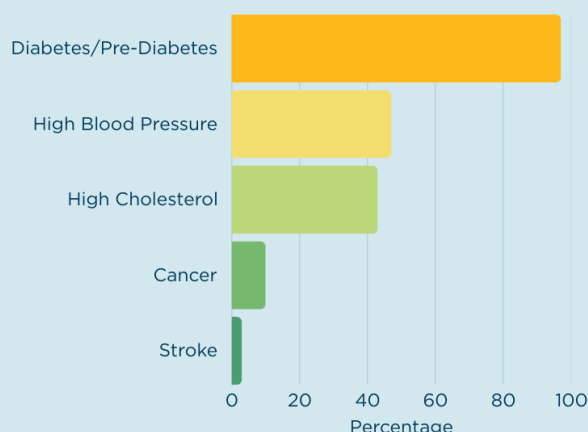
85% of participants reported using at least one form of public assistance, such as health insurance benefits or food-purchasing programs. For example, one-third of participants are SNAP recipients and almost half are on Medicaid. Participation in programs like FAM3 could improve participants' health and quality of life while reducing healthcare costs charged to Medicaid.

Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Monique Marshall (MMarshall@feedingwestchester.org) at Feeding Westchester to learn more and connect.

HEALTH CONDITIONS

Every participant who enrolled in the program reported at least one chronic condition. Diabetes & pre-diabetes were the most prevalent, reported by 97% of participants. High blood pressure followed at 47%, and high cholesterol at 43% making them the second and third-most common diagnoses, respectively. Feeding Westchester's FAM3 program is designed to treat these chronic conditions using the health benefits of nutritious foods.

Prevalence of Health Conditions Among Participants



DIETARY HABITS

Vegetable intake was low, with over half of participants consuming vegetables 3 times or less in the previous week; just under one-third reported similarly limited fruit consumption. **This is below the national average fruit & vegetable intake, which is once per day for vegetables and 1.6 times per day for fruit.** Feeding Westchester aims to support fruit and vegetable consumption by providing both shelf stable and fresh produce options to help meet patients' dietary needs and preferences.

¹preliminary analysis of data spanning 2023-25; intervention concludes in 2026

²sample sizes may vary due to missing data



Food Bank of Northern Nevada

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

The Food Bank of Northern Nevada (FBNN) launched the Prescription Pantry Program in 2017, partnering with health care providers in the Reno-Sparks metropolitan area to provide food as medicine services. In 2021, the project expanded into rural areas, including Nevada's capital Carson City. The program now includes 13 healthcare partners and 14 partner food pantries across northern Nevada.

PROGRAM MODEL

Patients are screened for food insecurity and/or identified as having a cardiovascular condition or diabetes. Those eligible receive a food prescription that can be redeemed at participating pantries, which are stocked with additional nutrient-dense foods through this program to support health-focused dietary recommendations.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

3,432

program participants

30,000+

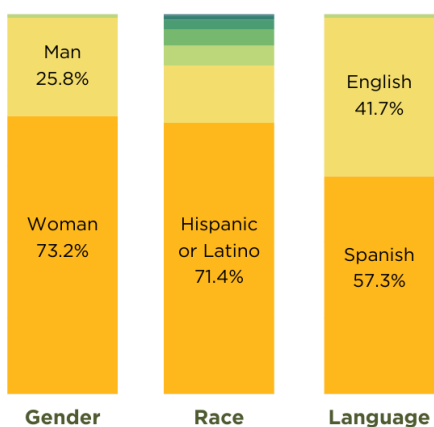
benefitted from additional foods offered at participating pantries

Anthem  Foundation

Food Bank of Northern Nevada is a recipient of Elevance Health Foundation (Anthem Blue Cross and Blue Shield)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND



A total of 199 individuals participated in the baseline FAM3 survey.² Women represented 73.2% of participants, and the average age was 48 years.

HEALTH CONDITIONS

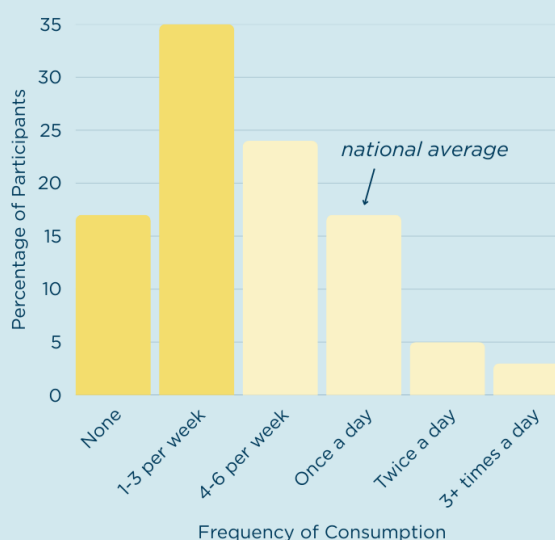
Approximately 60% of participants enrolled in the program reported at least one chronic condition. One-third reported a diagnosis of either diabetes or pre-diabetes. FBNN's FAM3 program is designed to treat these chronic conditions using the health benefits of nutritious foods.

Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Frankie Ortiz (fortiz@fbnn.org) at Food Bank of Northern Nevada to learn more and connect.

DIETARY HABITS

There is an opportunity to increase fruit and vegetable intake, as 52% of participants reported eating none or just 1-3 servings of vegetables in the past week, and 40% reported similarly low fruit intake. To help improve access, FBNN offers a variety of nutritious foods on a monthly menu, including fruits, vegetables, lower-sodium options, dairy, and lean proteins.

*During the past week, how many times did you eat **vegetables**?*



PUBLIC ASSISTANCE

87% of participants reported using at least one form of public assistance, such as health insurance benefits or food-purchasing programs.

“ *This is a great service... I get a variety of healthy options & enough to help me get through the week.*

- NORTHERN NEVADA PARTICIPANT

¹preliminary analysis of data spanning 2023-25; intervention will conclude in 2026

²sample sizes may vary due to missing data



Freestore Foodbank

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

Freestore Foodbank's Food as Medicine program focuses on 15 clinic-based food pantries across various partner health systems. Most locations have a choice pantry, while others offer patients pre-packed boxes. Some clinics also provide patients with produce vouchers for Freestore's mobile produce truck, or offer pop-ups to their patients and community. Healthcare system partners also refer patients to Freestore's Direct home-delivery produce program.

PROGRAM MODEL

Health care partners conduct a food insecurity screening upon patient intake. If a patient screens positive or indicates that they are in need, the staff provides them with food from the pantry and/or referrals to other Freestore programs. Patients complete preference sheets to customize the foods they receive. At each clinic appointment, the patient receives a healthy food bag with three to four days of food.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

10,500+

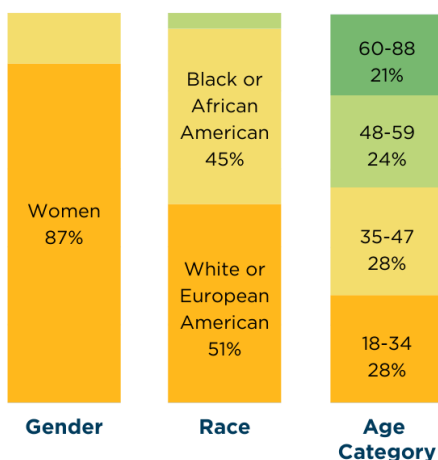
patients screened positive for food insecurity and received food from the FAM3 program

Anthem  Foundation

Freestore is a recipient of Elevance Health Foundation (Anthem Blue Cross and Blue Shield)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND



A total of 76 individuals participated in the baseline FAM3 survey.² Women represented 87% of participants, and the average age was 45 years.

PUBLIC ASSISTANCE

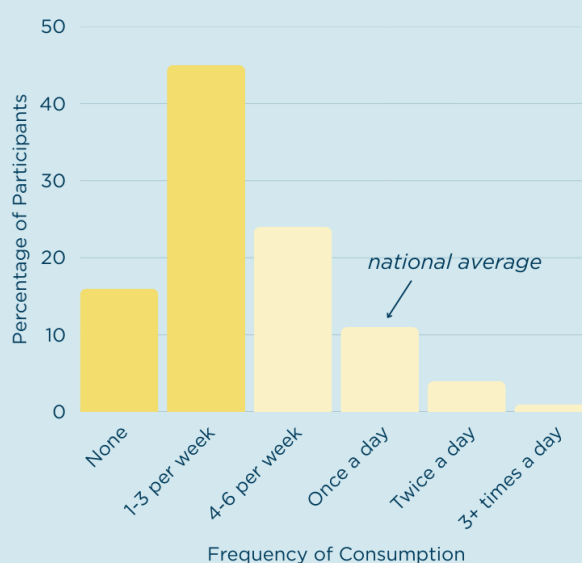
95% of participants reported using at least one form of public assistance, such as health insurance benefits or food-purchasing programs. For example, over half of participants are SNAP recipients and almost two-thirds are on Medicaid. Participation in programs like FAM3 could improve participants' health and quality of life while reducing healthcare costs charged to Medicaid.

Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Ann Viancourt (AViancourt@FreestoreFoodbank.Org) at Freestore to learn more and connect.

DIETARY HABITS

Vegetable intake was low, with 61% of participants consuming vegetables 3 times or less in the previous week; the same percentage reported similarly limited fruit consumption. **This is below the national average fruit & vegetable intake, which is once per day for vegetables and 1.6 times per day for fruit.** Freestore aims to support fruit and vegetable consumption by providing both shelf stable and fresh produce options to help meet patients' dietary needs and preferences.

*During the past week, how many times did you eat **vegetables**?*



HEALTH CONDITIONS

71% of participants enrolled in the program reported at least one chronic condition. 53% had been diagnosed with high blood pressure. 38% reported a diagnosis of diabetes or pre-diabetes. Freestore's FAM3 program is designed to treat these chronic conditions using the health benefits of nutritious foods.

¹preliminary analysis of data spanning 2023-25; intervention concludes in 2026

²sample sizes may vary due to missing data



Gleaners Food Bank

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

Gleaners Food Bank of Indiana (GFB), in partnership with Eskenazi Health, supports food-insecure patients with chronic conditions by providing access to nutritious food, nutrition education, and resources for managing their health.

PROGRAM MODEL

Eskenazi Health's Lifestyle Medicine program participants are screened for food insecurity. Patients who screen positive receive a food voucher for redemption at the market or mobile locations. Eskenazi Health's SNAP outreach coordinators also distribute food vouchers, connecting patients in high-need areas to immediate and long-term food assistance resources. Depending on household need, patients can receive vouchers once or twice each month. A new initiative introduced in year 2, Gleaners2Go, allows patients to order food online for pick up at a time that is convenient for them.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

3,000+

patients received food
from the program

3,500+

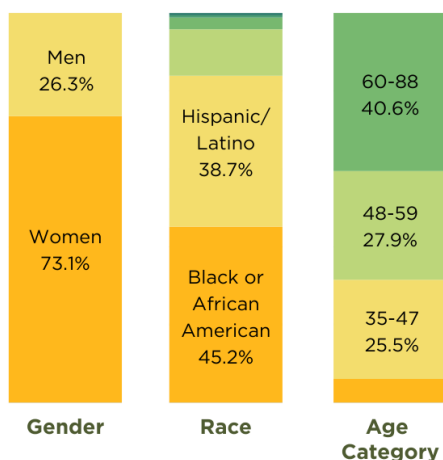
SNAP applications
completed



Gleaners Food Bank is a recipient of Elevance Health Foundation (Anthem Blue Cross and Blue Shield)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND



A total of 175 individuals participated in the baseline FAM3 survey.² Women represented 73.1% of participants, and the average age was 54 years.

PUBLIC ASSISTANCE

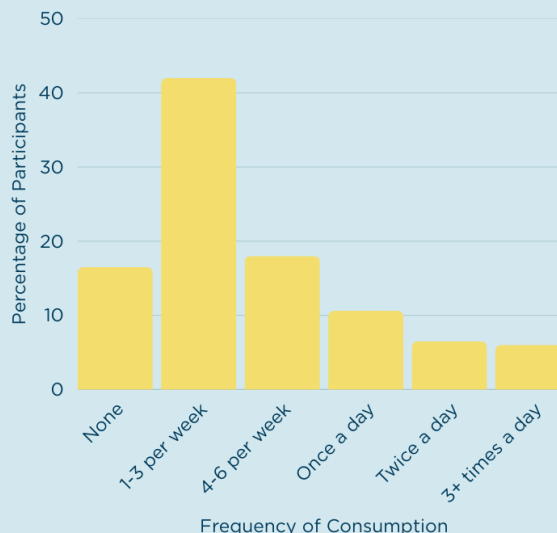
82% of participants reported using at least one form of public assistance, such as health insurance benefits or food-purchasing programs. For example, one-third of participants are SNAP recipients and almost half are on Medicaid. Participation in programs like FAM3 could improve participants' health and quality of life while reducing healthcare costs charged to Medicaid.

Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Mary Dubinin (mdubinin@gleaners.org) at Gleaners Food Bank to learn more and connect.

DIETARY HABITS

Vegetable intake was low, with 77% of participants consuming 6 times or less in the previous week; 63% reported similarly limited fruit consumption. **This is below the national average fruit & vegetable intake, which is once per day for vegetables and 1.6 times per day for fruit.** In FY24, GFB distributed over 47 million meals with fruits and vegetables to neighbors in their 21 county service area.

*During the past week, how many times did you eat **vegetables**?*



HEALTH CONDITIONS

92% of neighbors who enrolled in the program reported at least one chronic condition. Diabetes & pre-diabetes were the most prevalent, reported by 81% of participants. High blood pressure followed at 63%, and high cholesterol at 49% making them the second and third-most common diagnoses, respectively. GFB's FAM3 program is designed to treat these chronic conditions using the health benefits of nutritious foods.

¹preliminary analysis of data spanning 2023-25; intervention concludes in 2026

²sample sizes may vary due to missing data



Greater Baton Rouge Food Bank

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

Greater Baton Rouge Food Bank (GBRFB) collaborates with local healthcare institutions, including hospitals and clinics, to provide food boxes to patients experiencing food insecurity.

PROGRAM MODEL

Medical providers at GBRFB food as medicine partner locations screen patients for food insecurity. Those who screen positive receive a food box along with information on how to access a nearby GBRFB pantry.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

10,000+ ~4,500

patients screened positive for food insecurity & received food from the program

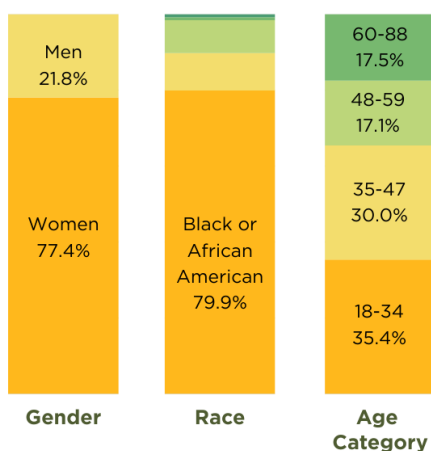
patients referred to SNAP



Greater Baton Rouge Food Bank is a recipient of Elevance Health Foundation (Wellpoint)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND



A total of 257 individuals participated in the baseline FAM3 survey.² Women represented 77.4% of participants, and the average age was 42 years.

HEALTH CONDITIONS

High blood pressure was the most prevalent chronic condition, reported by 47% of participants. Diabetes & pre-diabetes followed at 23%, making it the second-most common diagnosis. GBRFB's FAM3 program is designed to treat these chronic conditions using the health benefits of nutritious foods.

PUBLIC ASSISTANCE

90% of participants reported using at least one form of public assistance, such as health insurance benefits or food-purchasing programs. For example, 43% of participants are SNAP recipients and 49% are on Medicaid.

¹preliminary analysis of data spanning 2023-25; intervention will conclude in 2026

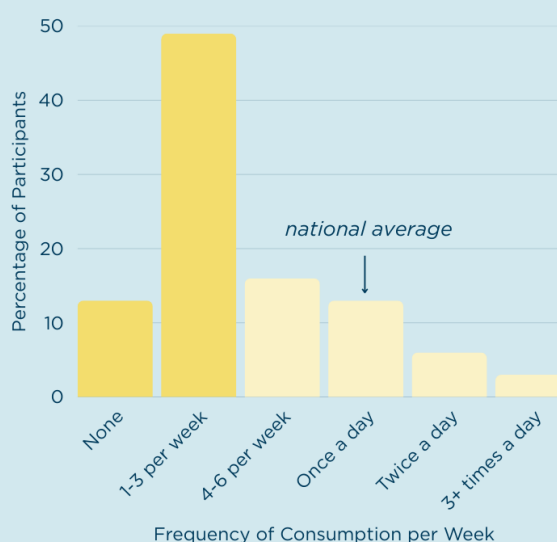
²sample sizes may vary due to missing data

DIETARY HABITS

Vegetable intake was low, with 61% of participants consuming vegetables 3 times or less in the previous week; 62% reported similarly limited fruit consumption.

This is below the national average fruit & vegetable intake, which is once per day for vegetables and 1.6 times per day for fruit. GBRFB aims to support fruit and vegetable consumption by providing food boxes and resources on accessing other healthy pantries.

*During the past week, how many times did you eat **vegetables**?*



“ [Greater Baton Rouge Food Bank] is giving something to someone who has nothing.

- FAM3 BATON ROUGE PARTICIPANT

Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Kyra Muse (kyra@brfoodbank.org) at Greater Baton Rouge Food Bank to learn more and connect.



HACAP Food Reservoir

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

HACAP Food Reservoir launched their Food as Medicine program in 2021 and it has since grown to include 30 clinic partners across the East Central Iowa region. The program provides shelf-stable food boxes to clinics who then distribute them to individuals who face food insecurity. Patients receive these food boxes at their health care appointments.

PROGRAM MODEL

Healthcare partners conduct food insecurity screenings using the Vital Hunger Survey or their internal screening tool to identify patients who would benefit from a food box. Patients who screen positive for food insecurity receive a food box referral. They then receive a food box designed to fit their needs and preferences. In addition, patients receive resources including information about local food pantries, WIC, and SNAP benefits as well as housing and veteran services.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

5,150

patients screened positive
for food insecurity

2,800+

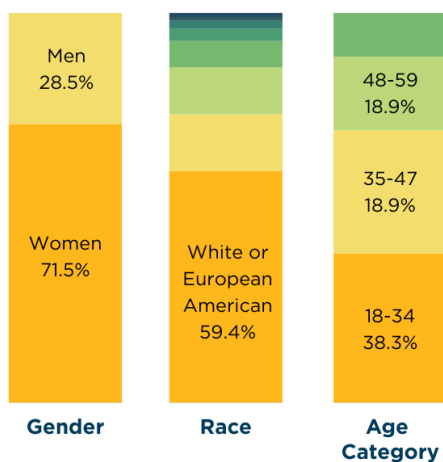
patients received food
from the program



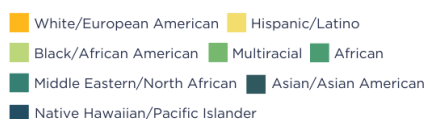
HACAP Food Reservoir was a recipient of Elevance Health Foundation (Wellpoint)'s Food as Medicine 3.0 grant — a three-year initiative (January 2023–December 2025) that supports partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of the program, one of several health and nutrition initiatives led by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND



A total of 196 individuals participated in the baseline FAM3 survey.² Women represented 71.5% of participants, and the average age was 41 years.

PUBLIC ASSISTANCE

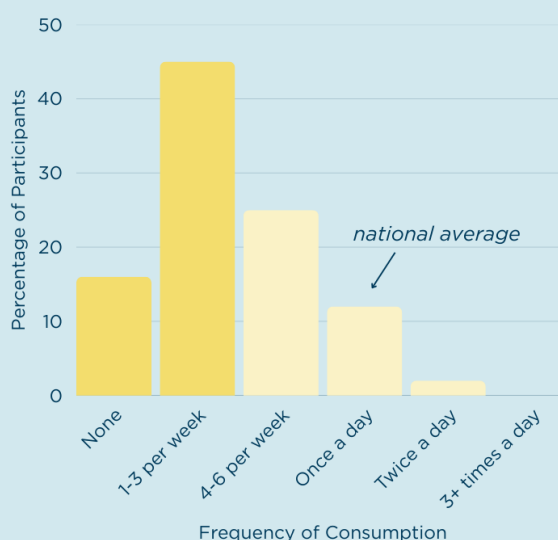
92% of participants reported using at least one form of public assistance, such as health insurance benefits or food-purchasing programs. For example, almost half of participants are SNAP recipients and over half are on Medicaid. Participation in programs like FAM3 could improve participants' health and quality of life while reducing healthcare costs charged to Medicaid.

Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Mallory Stewart (MStewart@hacap.org) at HACAP to learn more and connect.

DIETARY HABITS

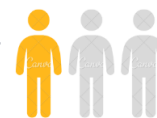
Vegetable intake was low, with 61% of participants consuming vegetables 3 times or less in the previous week; 64% reported similarly limited fruit consumption. **This is below the national average fruit & vegetable intake, which is once per day for vegetables and 1.6 times per day for fruit.** The HACAP Food Reservoir aims to support fruit and vegetable consumption by providing both shelf stable and fresh produce options to help meet patients' dietary needs and preferences.

*During the past week, how many times did you eat **vegetables**?*



HEALTHCARE ACCESS

In the past 30 days, over one-third of participants reported delaying/skipping necessary medical services and/or running out of medications due to cost. HACAP addresses these barriers by providing healthy foods to support chronic disease management and improve overall health.



¹preliminary analysis of data spanning 2023-25; intervention concludes in 2026

²sample sizes may vary due to missing data



Houston Food Bank

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

Houston Food Bank (HFB) collaborates with Harris Health, a public healthcare safety net system and other healthcare providers to integrate food insecurity screeners into their workflow to increase produce access to improve neighbors' long-term health and economic outcomes.

PROGRAM MODEL

Patients are enrolled into HFB's Food Rx program by a healthcare practitioner. Patients who face food insecurity are eligible, including neighbors with pre-existing conditions or at risk for diet-related chronic health conditions. Enrolled patients may visit the onsite pharmacy, if available, where staff enrolled patients into Link2Feed, a software that connects food pantries and health care partners within HFB's network. Patients can then redeem their prescription at any HFB-affiliated pantries.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

2,170

patients screened positive for food insecurity

800+

patients received food from the program

263

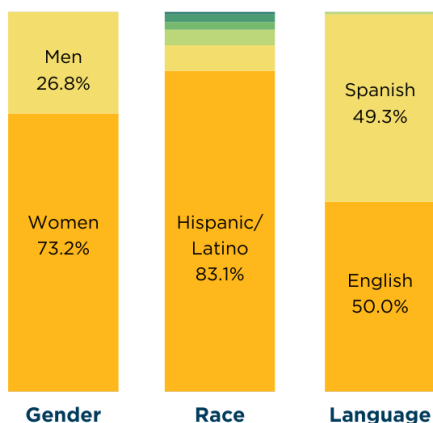
SNAP applications completed



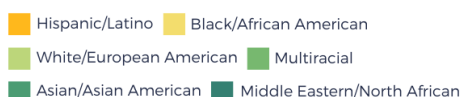
Houston Food Bank is a recipient of Elevance Health Foundation (Wellpoint)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND



A total of 150 individuals participated in the baseline FAM3 survey.² Women represented 73.2% of participants, and the mean age was 52 years.

HEALTH CONDITIONS

Diabetes and pre-diabetes were the most prevalent chronic conditions, reported by 88% of participants. High cholesterol followed at 60%, making it the second-most common diagnosis. The majority of participants described their self-perceived health status to be “fair” or “poor.” HFB’s FAM3 program is designed to treat these chronic conditions using the health benefits of nutritious foods.

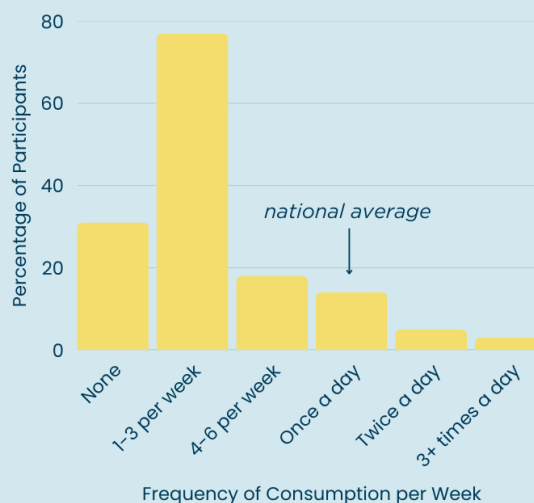
HEALTHCARE ACCESS

During the last 6 months, 50% of participants reported delaying or skipping medical services, or running out of necessary medications due to cost barriers.

DIETARY HABITS

Vegetable intake was low, with 72% of participants consuming vegetables 3 times or less in the previous week; 55% reported similarly limited fruit consumption. **This is below the national average fruit & vegetable intake, which is once per day for vegetables and 1.6 times per day for fruit.** HFB aims to support fruit and vegetable consumption by distributing produce biweekly and integrating nutrition education to empower neighbors to make informed food choices and adopt healthy eating habits.

*During the past week, how many times did you eat **vegetables**?*



Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Kimberley Morgan (kmorgan@houstonfoodbank.org) at Houston Food Bank to learn more and connect.

¹preliminary analysis of data spanning 2023-25; intervention will conclude in 2026

²sample sizes may vary due to missing data



Island Harvest Food Bank

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

Island Harvest partners with Harmony Healthcare to deliver the Nutrition Pathway Program (NPP). This intensive nutrition support program takes a multi-faceted approach to supporting patients living with low income and food insecurity. The program addresses hunger's root causes by providing access to healthy food, nutrition education and additional resources that help keep patients and their families healthy. Through the NPP, Island Harvest provides tailored nutrition counseling that assists with achieving food and health-related goals.

PROGRAM MODEL

Harmony Healthcare staff screen patients for food insecurity, and those who screen positive meet with Island Harvest's on-site nutritionist for intake. Each patient shares eating habits, dietary needs, allergies, cultural and preferred foods and cooking ability. For each of the 12 weekly or bi-weekly sessions, the patient receives a healthy food bag with three to four days of food.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

650+

patients screened positive
for food insecurity

~275

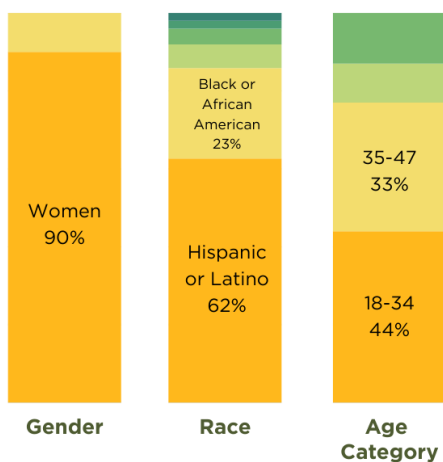
patients received food
from the program

Anthem  Foundation

Island Harvest is a recipient of Elevance Health Foundation (Anthem Blue Cross and Blue Shield)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND



A total of 52 individuals participated in the baseline FAM3 survey.² Women represented 90% of participants, and the average age was 39 years.

HEALTHCARE ACCESS

In the past 3 months, approximately 40% of participants reported delaying/skipping necessary medical services and/or running out of medications due to cost. Island Harvest addresses these barriers by providing healthy foods to support chronic disease management and improve overall health.

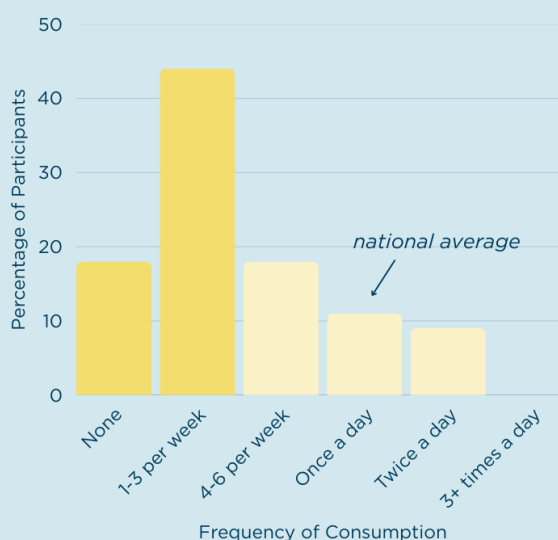


Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Melissa Klein (melissak@islandharvest.org) at Island Harvest to learn more and connect.

DIETARY HABITS

Vegetable intake was low, with 62% of participants consuming vegetables 3 times or less in the previous week; 41% reported similarly limited fruit consumption. **This is below the national average fruit & vegetable intake, which is once per day for vegetables and 1.6 times per day for fruit.** Island Harvest aims to support fruit and vegetable consumption by offering participants a choice of fresh, frozen, canned fruits and vegetables at the on-site pantry and connecting patients to additional food assistance resources and programs.

During the past week, how many times did you eat **vegetables**?



PUBLIC ASSISTANCE

77% of participants reported using at least one form of public assistance, such as health insurance benefits or food-purchasing programs. For example, just under half of participants are WIC recipients and almost a quarter are on Medicaid. Participation in programs like FAM3 could improve participants' health and quality of life while reducing healthcare costs charged to Medicaid.

¹preliminary analysis of data spanning 2023-25; intervention concludes in 2026

²sample sizes may vary due to missing data



Regional Food Bank of Northeastern New York

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

Since November 2019, the Regional Food Bank of Northeastern New York (RFBNENY) and St. Peter's Health Partners have partnered to offer a Food Farmacy for patients with diabetes experiencing food insecurity. The program provides weekly pantry packages (including fresh produce, lean proteins, and whole grains) and group sessions on healthy eating and disease management. It aims to improve food security, support diabetes management, promote wellness education, and reduce healthcare costs.

PROGRAM MODEL

Participants must screen positive for food insecurity, have a chronic metabolic condition and be willing to participate in education sessions for 12 weeks. The participants take part in an interactive evidence-based education program offered by certified diabetic educators and dietitians.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

3,700+

patients screened positive
for food insecurity

~900

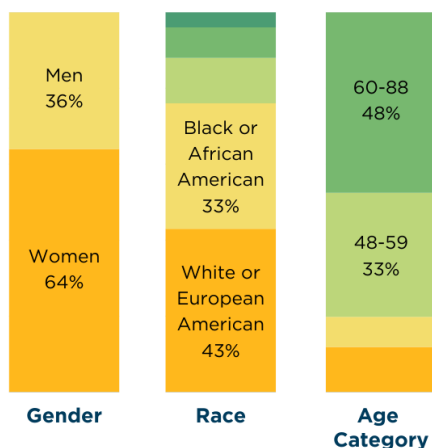
patients received food
from the program



Regional Food Bank of Northeastern New York is a recipient of Elevance Health Foundation (Anthem Blue Cross and Blue Shield)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND



A total of 53 individuals participated in the baseline FAM3 survey.² Women represented 64% of participants, and the average age was 56 years.

PUBLIC ASSISTANCE

Every participant reported using at least one form of public assistance, such as health insurance benefits or food-purchasing programs. For example, 66% are SNAP recipients and 74% are on Medicaid. Participation in programs like FAM3 could improve participants' health and quality of life while reducing healthcare costs charged to Medicaid.

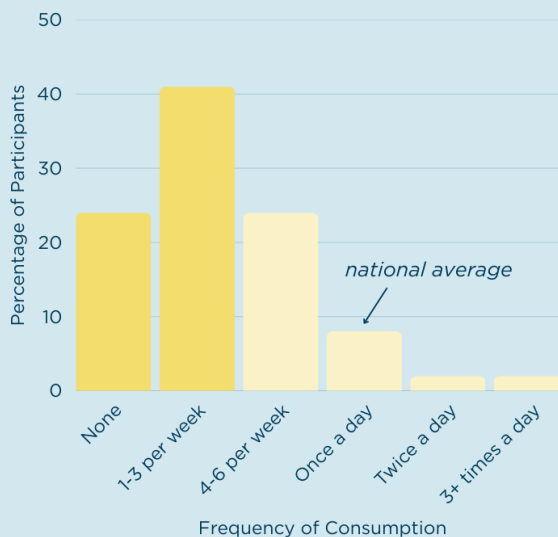
Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Sam Monks (samm@regionalfoodbank.net) at Regional Food Bank of Northeastern New York to learn more and connect.

DIETARY HABITS

Vegetable intake was low, with 65% of participants consuming vegetables 3 times or less in the previous week; 64% reported similarly limited fruit consumption. **This is below the national average fruit & vegetable intake, which is once per day for vegetables and 1.6 times per day for fruit.**

RFBNENY aims to support fruit and vegetable consumption by distributing food boxes with fresh produce and pantry staples.

During the past week, how many times did you eat **vegetables**?



HEALTH CONDITIONS

Over half of participants reported a diagnosis of diabetes or prediabetes. Additionally, 55% reported being diagnosed with high blood pressure, and just under half have high cholesterol. Fifty-eight percent described their health status to be either "fair" or "poor." RFBNENY's FAM3 program is designed to treat these chronic conditions using the health benefits of nutritious foods.

¹preliminary analysis of data spanning 2023-25; intervention will conclude in 2026

²sample sizes may vary due to missing data



FEEDING
AMERICA

St. Louis Area Foodbank

FOOD AS MEDICINE 3.0 GRANT SNAPSHOT

PROGRAM OVERVIEW

St. Louis Area Foodbank (SLAFB) partners with SSM Health System to provide food markets at hospitals across the city's metropolitan area. Participants receive healthy food bags and a referral to the food bank if desired. SLAFB SNAP outreach coordinators then connect participants to nearby food pantries as well as SNAP, WIC, and government-funded food resources.

PROGRAM MODEL

In partnership with seven hospitals in the SSM Health system, medical professionals screen patients for food insecurity. Those who screen positive are referred to the Bread Basket Program—an in-hospital food pantry, located in a limited-access area within the hospital, that provides low-sodium, shelf-stable foods. Upon discharge, each eligible patient receives a Bread Basket bag to take home. Simultaneously, a social worker can refer the patient—via a digital platform—to the St. Louis Area Foodbank (SLAFB), if desired. Within 72 hours, a SLAFB Community Access Coordinator contacts the patient to share local food pantry locations and provide assistance with public benefits applications.

PARTICIPANT REACH

APR. 2023 - DEC. 2024

~1,800

patients screened positive
for food insecurity

440+

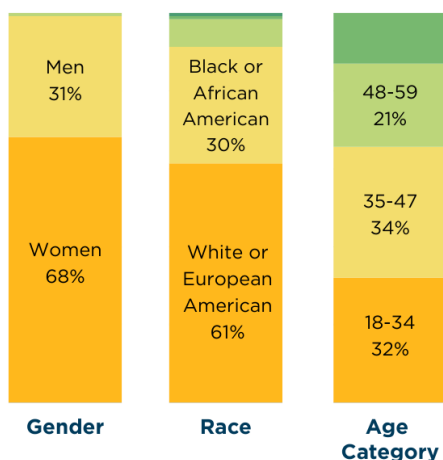
patients referred to
SNAP

Anthem  Foundation

St. Louis Area Food Bank is a recipient of Elevance Health Foundation (Anthem Blue Cross and Blue Shield)'s Food as Medicine 3.0 grant, a three-year program supporting partnerships between food banks and healthcare providers to screen patients for food insecurity and connect them with nutritious food resources. This document presents findings from the first two years of this initiative, one of many health and nutrition programs conducted by the food bank.

When entering the program, participants reported the following...¹

DEMOGRAPHICS



RACE LEGEND



A total of 131 individuals participated in the baseline FAM3 survey.² Women represented 68% of participants, and the average age was 43 years.

HEALTH CONDITIONS

Almost two-thirds of participants reported at least one chronic condition. High blood pressure was the most prevalent, reported by just under half of participants. Diabetes & pre-diabetes followed at 29%, and high cholesterol at 28% making them the second and third-most common diagnoses, respectively. SLAFB's FAM3 program is designed to treat these chronic conditions using the health benefits of nutritious foods.

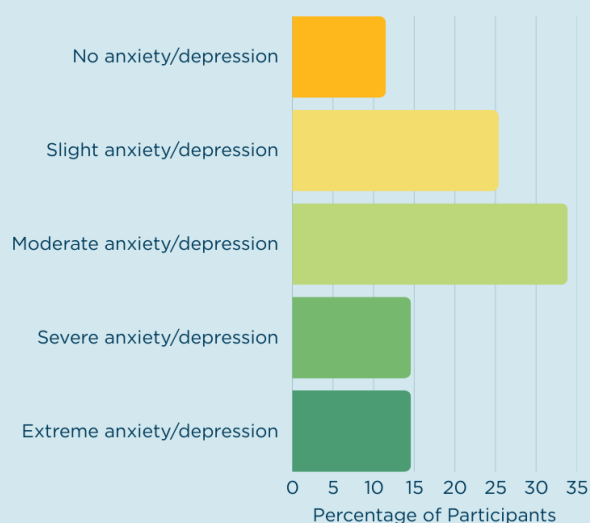
Further research and health outcomes from this evaluation will be shared in summer of 2026. Reach out to Rachel Jones (rjones@stlfoodbank.org) at St. Louis Area Food Bank to learn more and connect.

QUALITY OF LIFE

Many participants are experiencing significant challenges across key areas of daily functioning and well-being:

- **Usual Activities:** 28.5% are moderately to severely limited or unable to perform their usual activities.
- **Pain/Discomfort:** 50% experience moderate to extreme pain or discomfort.
- **Mental Health:** 63.1% report feeling moderately to extremely anxious or depressed.

When asked about their **anxiety or depression**, participants reported...



HEALTHCARE ACCESS & UTILIZATION

In the past 3 months, over 70% of participants either visited an emergency room or required overnight hospitalization. Additionally, over half of participants reported running out of medication or delaying/skipping medical care due to cost barriers. SLAFB addresses these barriers by providing healthy foods to support chronic disease management and improve overall health.

¹preliminary analysis of data spanning 2023-25; intervention concludes in 2026

²sample sizes may vary due to missing data